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Comparison of the effects of usual, support, and informational nursing interventions on the extent to which families of critically ill patients perceive their needs were met.

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COMPARISON OF THE EFFECTS OF USUAL, SUPPORT, AND INFORMATIONAL NURSING INTERVENTIONS ON THE EXTENT TO WHICH FAMILIES OF CRITICALLY ILL PATIENTS PERCEIVE THEIR NEEDS WERE MET

by

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A DISSERTATION

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ABSTRACT OF DISSERTATION
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Title Comparison of the Effects of Usual, Support, and Informational Nursing Interventions on the Extent to Which Families of Critically Ill Patients Perceive Their Needs Were Met

The purpose of this experimental study was to compare the effects of usual, support, and informational nursing interventions on the extent to which the family members of critically ill patients perceive their needs were met. The independent variable in this study was the nature of the nursing intervention. The dependent variables were the extent to which families perceived their needs were met in the categories of support, comfort, information, proximity, and assurance.

Sixty family members were randomly assigned into three groups. The control group received the usual staff nursing intervention. Families in one experimental group received the support nursing intervention and families in the other experimental group received informational nursing intervention.

The conceptual framework for this study is based on concepts from Family Systems Theory and the Neuman Systems Model. Both theories are applicable to family reaction to

stress and to the factors of reconstitution or adaptation that may be utilized by families. The literature review revealed numerous research studies identifying the needs of family members. However, very little research has been directed toward identifying the effectiveness of nursing interventions in meeting those needs.

Data were collected by use of the Critical Care Family Needs Inventory (CCFNI) (Molter & Leske, 1983) and an adapted version of the CCFNI to measure the extent to which the family member perceived needs were met between the group receiving the usual nursing intervention and the combined groups receiving support and informational nursing interventions. No significant differences were noted in the extent to which the family member perceived needs were met between the support and informational groups. Means and standard deviations were determined to identify a hierarchy of needs and how families rated needs were met. This analysis was done to determine if nursing interventions were meeting the needs families rated as most important.

Abstract Approved by: Committee Chairman Marguerite R Kenney

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CHAPTER I

INTRODUCTION

Over 80% of all Americans have been affected by critical illness (Foundation for Critical Care, 1987). Because critical illness often occurs without warning, there is little time for patients and their families to prepare for this experience. The sudden hospitalization that accompanies critical illness is viewed frequently as a crisis for both patients and their family members (Leske, 1988).

Traditionally, the emphasis in adult critical care has been on care of the patient, with little attention given to the family (Gaglione, 1984). Recently, greater emphasis is being given to the family, with recognition that (a) the family is an important source of support to the ill family member and may be crucial for survival (Cobb, 1976), (b) the patient and family are becoming increasingly involved in making decisions regarding the care received during hospitalizations (Kirchhoff, Hansen, & Fullmer, 1985), (c) family involvement in maternity and pediatric settings has resulted in physiologic benefits to the patient (Fagin & Nusbaum, 1978), and (d) the trend in nursing toward holistic patient-centered care requires consideration of the patient as part of a family unit (Hymovich, 1974).

Hospitalization for an acute life-threatening illness is a stressful event not only to the individual but also to the family (Bedsworth & Molen, 1982). The family is usually the most important social unit to an individual and constitutes the parameters within which illness occurs and resolves (Molter, 1979).

Although the family constitutes a significant resource to the ill member, McCubbin and Patterson (1983a) noted that the family can also induce or magnify stress in the ill member. Many authors support that the family has an effect on the health of the patient (Brandt, 1984; Bunn & Clark, 1979; Chatham, 1978; Craven & Sharp, 1972; Doerr & Jones, 1979).

Because of the relationship between the family's ability to cope and the well-being of the patient, nursing care of the critically ill patient must include assessment of the family's needs and interventions designed to meet those needs. The literature supports that the family is susceptible to the influence of others in the environment (Brose, 1973; Rappaport, 1965). As critical care nurses are in continuous interaction with patients and their families, they are in an ideal position to be the responsible health team members for assisting families in coping with critical illness. The ability of nurses to meet the needs of families may affect the outcome of critically ill patients.

Admitting a family member to a critical care unit often produces a state of crisis in a family (Lust, 1984). Families use a variety of resources and coping mechanisms in an

attempt to maintain functional equilibrium (Smilkstein, 1980). Bozett and Gibbons (1983) have found that one strategy of adaptation used by families is the gathering of adequate information to help them know what to expect and what to do next. Thus, an important nursing activity is to give families the information they need in a clear, concise, and timely fashion.

Nursing interventions that reduce family stress benefit not only the family members but also the patient. According to Bozett and Gibbons (1983), the amount of support the family can offer the patient increases as the stress a family experiences decreases.

Critical care nurses recognize the importance of including the family into the plan to provide holistic nursing care. Hymovich (1974) stated that incorporating the family into the plan of care is essential if nurses are to provide quality patient care. Unfortunately, although nurses agree that family centered care is important, the family frequently is cited as a source of stress to the critical care nurse (Dunkle & Eisendrath, 1983; Jacobson, 1983). Time constraints, lack of knowledge in how to deal with family members, lack of understanding of family needs (Molter, 1979), and lack of planned management strategies (Jillings, 1981) are primary factors contributing to this problem. In addition, research has shown that there is a significant difference in the needs of family members of critically ill patients as perceived by family members and critical care nurses (Norris & Grove, 1986).

The time of staff nurses is primarily spent in giving care to the patient and little time is left to help families deal with their crises (Molter, 1979). Staff contact with families is generally brief. Regulations restricting visitation in critical care units limit the number of times family members see the nurse in 1 day. When families do speak with a nurse, the encounter is brief and the problems discussed are usually those perceived to be significant by the nurse and not by the family member (Daley, 1984). In these situations, energy and time may be spent by staff members in trying to cope with nonexistent needs or needs already met by others (Molter, 1979). This process is repeated by successive shift personnel, with very little, if any, progress being made to identify or meet what families perceive as their greatest needs (Daley, 1984).

Purpose

The purpose of this study is to compare the effects of usual, support, and informational nursing interventions on the extent to which the family members of critically ill patients perceive their needs were met.

Conceptual Framework

The conceptual framework for this study is based on concepts from Family Systems Theory and the Neuman Systems Model. Both theories are applicable to family reaction to stress and to the factors of reconstitution or adaptation that may be utilized by families.

Family Systems Theory

A family meets the two basic requirements of a system as established by Buckley (1967). Family members are related to one another in a network of interactions and families attempt to maintain a state of equilibrium known as family homeostasis (Jackson, 1957). A change in any family member produces reaction, counterreaction, and shifts in family equilibrium (Olsen, 1970).

The four basic characteristics of a family system are (a) the system is open, rather than closed, and has a continuous interchange with the external social and physical environment; (b) it is complex with an intricate organizational structure; (c) it is self-regulating, in the sense of containing homeostatic mechanisms to restore balance; and (d) it is capable of transformation. The family system is confronted with continuous internal and external demands for change. Because of these demands, families may be able to respond with growth, flexibility, and structural evolution (Shapiro, 1983). Consequently, the family is a powerful determinant of behavior and can foster adaptive as well as maladaptive activities (Turk & Kerns, 1985).

The integrity of the family system may be compromised when an illness requires hospitalization. Friedman (1981) stated that a serious illness can affect the family's function and structure. The family system helps determine the course and outcome of acute injuries and acute diseases (Boyce, Jensen, Cassell, Collier, Smith, & Ramsey, 1977; Meyer & Haggerty, 1962). As patients and their families

struggle to cope with the situation, the seriousness of the illness of the patient may throw the highly organized family into disequilibrium, resulting in an increase in stress for the patient as well as other family members (Olsen, 1970). McCubbin and Patterson (1983b) noted that the family can induce or magnify stress in the patient, particularly if the family is unable to cope with the disorganizing events of a serious illness.

The predominance of literature on family stress is derived from sociological literature and is based largely on the work of Hill (1949). Hill's theory, ABCX Family Crisis Model, involved four concepts: (a) the stressor event, (b) existing resources, (c) the perception of the situation, and (d) crisis. The interaction of the stressor event, resources, and perception produces, or has the potential to produce, a crisis within the family. Hill's model focuses on pre-crisis variables that affect the adaptive ability of a family faced with a major stressor event. The ABCX Family Crisis Model was the earliest conceptual foundation for research to examine the variability of stress in families.

McCubbin and Patterson's (1983a, 1983b) Model of Family Behavior expands upon Hill's (1949) original ABCX model by adding post-crisis variables that will influence the family's ability to achieve adaptation over time. The four variables in this model are family adaptation, family demands, family adaptive resources, and the family perception of the crisis situation. This model is useful in explaining family behavior in response to stressor events. The model

incorporates both normative and catastrophic stress-inducing events as well as the family's response to these events. Stress emerges from an actual or perceived imbalance between demands and adaptive resources.

The Neuman Systems Model

The Neuman Systems Model was selected to guide the nursing interventions in assessing family needs and planning a nursing intervention to meet the family's needs. In the Neuman Model the family is represented within the system's perspective holistically and multidimensionally (Cross, 1985). The physiological, psychological, sociocultural, developmental, and spiritual variables identified in this model ideally function in a stable relationship with internal and external environmental stressors. These stressors have influence on the family system at all times (Neuman, 1989).

The Neuman Model (Neuman, 1989) is based on the concepts of stress and the subsequent reactions. The family system delineates the domain of nursing concern. The conceptual model utilizes a systems-based perspective to explain how system stability is achieved in relation to stressors imposed upon it. Nursing is concerned with all potential stressors and the model provides a means of organizing the assessment of these stressors. The main nursing goal is to facilitate optimal wellness for the family through retention, attainment, or maintenance of family system stability (Neuman, 1989).

This study is based on the three concepts of the Neuman Systems Model (1989), i.e., man, stress, and environment. Man is identified as the individual, the family, or the community as a client system. Based on this identification, the concept of man can be applied to describe family needs.

Neuman used Selye's (1950) work to define stressors as tension-producing stimuli occurring within the internal and external boundaries of the family system. Stressors are classified as intrapersonal, interpersonal, and extrapersonal. Neuman (1989) stated that stressors are neutral but the outcome of an encounter with a stressor may be beneficial or noxious, positive or negative.

Environment is defined by Neuman (1989) as all internal and external factors or influences that surround the family system. The relationship between the family system and environment is reciprocal. The input, output, and feedback between the family system and environment are of a circular nature and the family system may influence or be influenced by environmental forces.

Relational Statements

Boykoff (1986) stated that family systems theory serves as a guide for the nurse in assessing and supporting the family as it confronts the hospitalization of one of its members in a critical care unit. The family may be viewed as a system of interdependent parts wherein reciprocal behavior occurs.

The family as a unit is complicated, powerful, and at times extremely difficult to understand. There are some relational characteristics of families that should be considered in approaching families as a whole. According to Family Systems Theory, the family is a system that is greater than the sum of its parts. The family is not just a group of people living together but is a dynamic entity with a life structure and institutions of its own (Burnsten, 1965). Families are highly organized and have developed homeostatic mechanisms for the maintenance of a tolerable stability, while at the same time satisfaction of the emotional and physical needs of the members is provided. Family members are constantly interacting, each person adapting to pressure from within himself or herself, from family subsystems, and from society. Roles within families are readjusted as people and conditions change (Ferreira, 1963).

Nurses can base their assessments and care on a perspective of the family as an interactional unit. An actual or potential life-threatening illness of a family member is viewed by the family unit and individual family members as an unpleasant stressful event. The stressor event may create a crisis for the family and family members that may be resolved quickly or that may be prolonged, depending on their ability to adapt to the situation. The demands of the stressor event and the additional stressors of unmet family needs associated with a hospitalization may exceed the ability of the family unit or of individual family members to

meet these demands through available adaptive resources (McCubbin & Patterson, 1983a).

If an imbalance of demand and resources exists, the family unit and individual family members are in a state of crisis. As the demands of unmet needs increase, the crisis in the family also increases. Mounting stress increases the severity of the crisis for the family and family members (McCubbin & Patterson, 1983b).

Conceptual Model

A conceptual model has been developed for this study. An adapted version of The Cycle of Family Function (Smilkstein, 1980) is illustrated in Figure 1. This model has been adapted to include the major concepts of this study relating to the response of family members to a crisis-inducing situational stressor and the role of nursing in assessing and intervening with the families experiencing this crisis.

The Cycle of Family Function (Smilkstein, 1980) is a model that illustrates family response to stressful life events. A functional family maintains equilibrium by utilizing its intrinsic resources to meet the needs of its family members on a daily basis. A traumatic injury to a family member results in many stresses for the family. Families may not be able to resolve the stress by utilizing their usual problem solving resources. This inability results in a state of family disequilibrium or impaired family functioning. Families in this stage must utilize resources that fall into the general categories of familial and

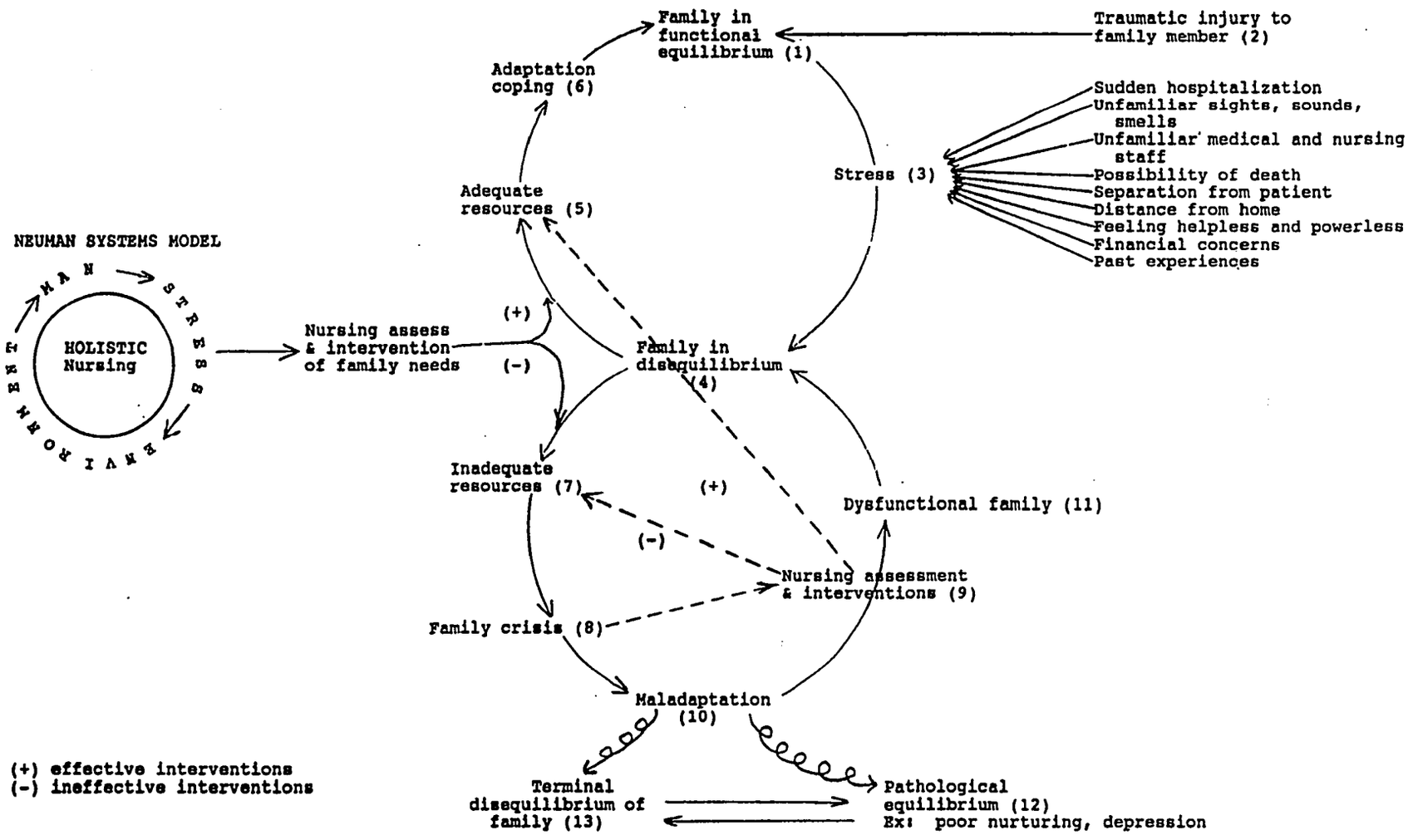

Figure 1. The cycle of family function

extrafamilial social, cultural, religious, economic, educational, environmental, and medical support systems (Smilkstein, 1980).

Families with adequate resources may develop coping behavior and adaptation to the stress. Coping behaviors include sharing points of view; pooling resources; making appropriate role changes; adjusting the routine activities of work, study, and play; and tolerating tension and discomfort (Smilkstein, 1980). These behaviors result in a return to family nurturing or family equilibrium (Selye, 1956).

When families lack adequate resources they may not develop coping behaviors or adaptation. A state of family crisis may develop, leading to maladaptive behaviors and dysfunctional families. Unresolved family crisis and dysfunction may result in pathological defense mechanisms. Families in pathological equilibrium frequently report symptoms of depression, fighting, scapegoating, criticizing, or arguing (Smilkstein, 1980).

Failure to resolve crises, the discomfort of living with pathological defense mechanisms, and the poor nurturing environment of a family in pathological equilibrium all serve to lead some families into terminal disequilibrium. In this state, there are no nurturing functions, and family dissolution frequently occurs (Smilkstein, 1980).

The Neuman Systems Model serves as a guide for nursing assessments and interventions designed to identify and meet family needs. Critical care nurses have contact with

families when they are in a state of disequilibrium. Effective assessment of family needs and interventions designed to meet those needs may assist the family in utilizing adequate resources. Ineffective nursing interventions may result in inadequate resources for the family, and family crisis may develop. Nurses must continue to assess and develop interventions when a family is in crisis that may assist the families in developing adequate resources.

It is now recognized that family needs are not being met effectively through the usual nursing staff interventions. If family members' needs for continued support and information are met, they will be better able to contribute to the patient's recovery. It is important that critical care nurses identify and develop effective nursing interventions that will assist families in meeting these needs. By addressing family needs, nurses will help educate the families about the breadth of nursing capabilities beyond that of technicians only able to take temperatures and blood pressures (Daley, 1984). In addition, nurses may find families to be one of their greatest resources for patient care and support (Hickey, 1990).

Research Question and Hypothesis

The following research question guided this study: Is there a difference in the effects of usual, support, and informational nursing interventions on the extent to which the family member of a critically ill patient perceives his or her needs were met?

The research hypothesis tested in this investigation is as follows: There is a difference in the effects of usual, support, and informational nursing interventions on the extent to which the family member of a critically ill patient perceives his or her needs were met.

Assumptions

For the purpose of this study, the following assumptions were made:

1. Families with a critically ill family member in an intensive care unit have needs (Molter, 1976; Norris & Grove, 1986; Raise, 1980; Rodgers, 1983).

2. Family members will be able to identify and rate the importance of their needs (Daley, 1984; Hampe, 1975; Molter, 1979).

3. Families with critically ill family members will have some needs met.

Significance of the Study

Critical care nurses are responsible not only for the patients in their units but also for the patients' families. Nurses must consider a patient as a member of a family, not as an isolated person. The literature supports including families in developing a plan of care for patients, especially in times of crisis (Bozett & Gibbons, 1983; Hoover, 1979; Ritchie, 1981).

Examining the importance of family needs, how these needs are perceived as having been met, and the effectiveness of nursing interventions contributes to the development and implementation of a plan of care for families with

critically ill family members. It is especially important to determine which needs are not being met, so that greater attention can be focused on developing nursing interventions to address these unmet family needs.

This investigation will contribute to the development of nursing theory related to the needs of families with critically ill family members. The effectiveness of nursing interventions and family perceptions of the extent to which their needs were met is an area that has not been reported through published research. Data from this study may serve to guide the development of planned nursing interventions based on theoretically sound and scientifically established knowledge.

Nursing curricula are incorporating critical care components into basic and graduate education. The concepts presented in these educational settings must be based on scientifically developed nursing knowledge. This research may enhance nursing education by contributing to theory development related to families with critically ill family members.

Further research in the area of families with critically ill family members is needed to expand the body of nursing science. Family-based research in adult critical care may contribute to theory development, quality care of critically ill patients, effective nursing interventions, and improvement of family-nurse relationships.

Summary

Admission of a family member into a critical care unit is a stressful event for the patient and the family. The importance of the supportive role of the family is evidenced in critical care philosophy (Kinney, Dear, Packa, & Voorman, 1981) and in research studies that demonstrate the positive effects of family support (Bay, Kupferschmidt, Opperwall, & Speer, 1988).

Family theory and the Neuman Systems Model are based on systems theory and the concept of a holistic approach. A critical illness or injury is a stressful event for the patient and his or her family. Hospitalization in a critical care area may throw the highly organized family into disequilibrium, resulting in an increase in stress for the patient as well as other family members.

Family responses depend upon the family's ability to utilize resources in the environment. The Neuman Systems Model provides a framework for nursing assessment and interventions designed to assist families in the utilization of available resources. The physiological, psychological, sociocultural, developmental, and spiritual variables identified in this model serve as a guide for appropriate nursing interventions.

A crisis situation in a family may impair the family's ability to assist the ill family member and may cause buried feelings of anxiety, hostility, and suspicion to surface. These feelings may be transferred to the patient, resulting in negative effects. It is now recognized that if family

members' needs are met, they will be better able to contribute to the patient's recovery (Chatham, 1978). Research directed toward the establishment of an adequate knowledge base should enhance the nurse's ability to plan more appropriate nursing interventions to comfort, support, and assist both patients and their family members during a life-threatening situation.

CHAPTER II

REVIEW OF RESEARCH

The review of research literature is divided into four sections. The first section includes needs of families with a terminally ill family member. The second section identifies the effects of family visitation on critical care patients. Section three includes studies that identify needs of families with a relative in a critical care unit. The last section includes studies related to needs of families when the critically ill family member has a specific condition or injury.

Needs of Families With a Terminally Ill Family Member

During the past decade nurses have begun to explore the psychological effect of critical illness on the family. In an early descriptive study, Hampe (1975) sought to determine whether grieving spouses of terminally ill patients could recognize their own needs, whether these needs were being met, and what role, if any, nurses had in helping them meet these needs. In Hampe's study, a need was identified as "a requirement of the person which, if supplied, relieves or diminishes his/her immediate distress or improves his/her sense of adequacy or well-being" (Orlando, 1961, p. 6). Using an open-ended interview schedule, Hampe (1975)

interviewed 27 spouses of terminally ill patients to determine the spouses' needs. Needs of spouses during hospitalization of their partners were identified as:

1. the need to be with the dying person;
2. the need to be helpful to the dying person;
3. the need to be assured of the comfort of the dying person;
4. the need to be informed of the dying person's impending death;
5. the need to be informed of the dying person's condition;
6. the need to ventilate;
7. the need for comfort and support of family members; and
8. the need for acceptance, support, and comfort from health professionals.

In this study, Hampe (1975) found that the needs listed above were not being consistently met. The spouses in this study believed that the nurse's primary responsibility was to the patient and that nurses were too busy to care for the families. From a grief-loss theoretical perspective, the consequences of unmet needs focused on diminished coping with death and emotional reactions such as fear, anxiety, feelings of helplessness, and threatened values.

Based on Hampe's (1975) work, Dracup and Breu (1978) conducted a similar investigation with grieving spouses of patients with a poor prognosis in a coronary care unit. As in the Hampe study, these investigators found the prevalence

of unmet needs to be high, ranging from 32 - 100% among the eight categories of needs. Based upon the identified needs, a nursing intervention protocol was developed and implemented by nurses in the coronary care unit.

Using an experimental design, spouses were assigned to one of two groups, each with 13 spouses of critically ill patients. The treatment group received the nursing intervention protocol, and the control group received routine nursing care. The treatment group reported a significantly greater incidence of need satisfaction for most categories of needs. Families also identified deprivation of social contacts, interruption of daily routines, role reversal, forced autonomy, and the loss of the provider and financial stability as possible sources of stress to the family and spouse of the critically ill patient.

Using an exploratory survey design, O'Brien (1983) identified the importance of needs to families of terminally ill patients, whether their needs were being met, and who was meeting their needs. The instrument consisted of a participant information sheet, a personal data sheet, and an interview schedule. The instrument contained 45 need statements developed by Molter (1979).

The sample consisted of 20 family members. The most important need identified by the spouse was the need to have questions answered honestly. The need for hope was expressed 90% of the time. No new needs were identified, and all needs were considered very important by at least 1 person. Thirty (66%) of the 45 needs were met greater than 50%

of the time. The need to know that the patient was comfortable was the only need that was met 100% of the time. The combined efforts of physicians and nurses resulted in 86% of the needs being met.

Effects of Family Visitation on Critical Care Patients

Several research studies have investigated the effect of family visitation on the critically ill relative. Bay and associates (1988) investigated the effect of the family visit on the patient's mental status. A revision of the Mental Status Examination (Adams, 1978) was used to assess the ICU patient's mental status. The instrument measured behaviors of cognitive impairment, paranoia, hallucinations, disorientation, and confusion.

Data from this exploratory study seem to indicate that family members (N = 74) who see themselves as having a moderate degree of family closeness have the most positive effect on the patient's mental status. However, for those families who claimed to have either a high or low degree of family closeness, the family member's visit did not affect the patient's mental status. The results of this study show that the family visit had little effect on the patient's mental status change score.

Brown (1976) conducted a study to determine whether visits of family members (N = 25) would be considered to be a stress-producing event and whether changes in physiological measurement taken during family visitation would give some indication of the patient's response to this form of

psychosocial interaction. Findings revealed a family visiting period of 10 min every hour creates a stressful effect on the blood pressure and heart rate of cardiac patients in a cardiac care unit (CCU). The restricted visitation schedule was found not to be conducive to good patient management. Brown (1976) suggested that further studies should be conducted to determine what other types of CCU visiting might promote better patient care.

Fuller and Foster (1982) compared the effects of family/friend visits versus task-oriented nurse-patient interactions on the heart rate, blood pressure, and vocal stress of surgical intensive care patients. The study included an analysis of differences in any cardiovascular variable during and at the end of the nurse-patient interaction or the family visit when compared to values just before the interaction or visit. There was no significant difference between family visits and nurse-patient interaction in regard to vocal micro-tremor, before or after the visit interaction.

Doerr and Jones (1979) studied the effect of family preparation on the state anxiety level of patients in the CCU. It was hypothesized that family members who receive pre-CCU preparation would transmit less family-to-patient anxiety than would family members who did not receive such preparation. Six male and 6 female CCU patients (N = 12) were randomly assigned to either the experimental (family prepared) or the control (family nonprepared) group. A pretest-posttest control group experimental design was used.

The major dependent variable was the previsitation to post-visitation state anxiety change score. The investigators concluded that family preparation significantly reduced the amount of anxiety transferred from the family members to the CCU patient.

Chatham (1978) investigated the effect of family involvement on patients' manifestations of postcardiotomy psychosis. The purpose of this experimental study was to determine if there was a measurable degree of difference in manifestations of postcardiotomy psychosis among those patients whose significant family member received systematic instruction, as compared with those patients whose significant family member received no systematic instruction. The study included experimental and control groups of patients, each consisting of 10 Caucasian men between the ages of 45 and 64 years. Data from this study suggest that patients whose families received the instruction exhibited fewer manifestations of postcardiotomy psychosis. Results from this study and the study by Doerr and Jones (1979) lack power as a result of the small sample sizes utilized.

Needs of Families With a Relative in a Critical Care Unit

An exploratory descriptive study was designed by Molter (1979) to ascertain the needs of family members of critically ill patients. In structured interviews, 40 relatives of critically ill patients rank-ordered need statements according to importance and fulfillment. They also reported if

their needs were met and by whom. The needs reported as most important, in ranked order, were:

1. to feel there is hope;
2. to feel that hospital personnel care about the patient;
3. to have the waiting room near the patient;
4. to be called at home about changes in the patient's condition;
5. to know the prognosis;
6. to have questions answered honestly;
7. to know specific facts about the patient's progress;
8. to receive information about the patient once a day;
9. to have explanations given in terms that are understandable; and
10. to see the patient frequently.

The data suggest that the 10 most important needs were met more than 50% of the time. The relatives frequently stated that they did not expect health care personnel to be concerned about their needs, but rather to be concerned about the needs of the patient. The published research report did not include a frequency distribution of unmet needs or a theoretical definition of family needs. Although the author stated that a stress-crisis framework guided the instrument development, the relationship between the family needs assessment and the theoretical framework was unclear.

In a recent study, Leske (1986) compared the results of Molter's (1979) study with the results from her study sample (N = 55). In Leske's investigation, the definition of family needs was clearly stated as "a requirement which, if unmet, produces distress" (p. 190). This definition was consistent with the family crisis framework that guided the study. Only 9 of the 45 need items differed significantly in importance from those in Molter's investigation, and none of these items were among the 15 highest-ranked needs from Molter's investigation. The incidence of unmet needs was not reported.

Daley (1984) conducted a study to determine the perceived needs of family members, and who was perceived as being the most likely persons to meet these specific needs. Forty family members were interviewed within 72 hr of a family member's admission to a critical care unit.

Forty-six family need statements, derived from studies by Molter (1979) and Hampe (1975), were organized under six general categories. Utilizing results of a family needs assessment study (N = 40), the categories were then ranked according to relative importance. These categories, in order of importance, were:

1. the need for relief of anxiety,
2. the need for information,
3. the need to be with the patient,
4. the need to be helpful to the patient,
5. the need for support and ventilation of emotion, and

6. personal need.

The four specific need items that were most important to families within the initial 72-hr period after a patient's admission to a critical care setting were:

1. to receive information about the relative's condition,

2. to be kept informed as honestly as possible,

3. to have a chance to speak to the physician, and

4. to know that their relative is receiving the best possible care.

Families indicated they were least concerned about being alone, having friends or children visit, and having such personal needs as food or coffee available to them.

Needs were defined as physiologic or psychologic requirements of individuals. Family systems and stress-crisis theories provided the framework for the study (Daley, 1984). Alleviation of stress, crisis prevention, and relief of anxiety were cited as expected outcomes of nursing interventions aimed at meeting family needs. The incidence of unmet needs was not reported.

Bouman (1984) categorized needs according to cognitive, emotional, and physical categories. Using a Q sort methodology with Molter's (1979) 45 need items, the subjects ($\underline{N}$ = 34) ranked cognitive needs significantly higher than needs in the other two categories. The need items in the cognitive category were those needs that were ranked as most important in previous studies. The findings related to consequences of unmet needs were consistent with those cited

in previous studies of stress in families with relatives in intensive care. The incidence of unmet needs was not evaluated in this investigation.

Prowse (1984) compared 40 family members' and 31 nurses' perceptions of family needs (N = 71) in a descriptive study. Results revealed responses from nurses demonstrated a general agreement with family members regarding the importance of needs. Family members and nurses were also in general agreement regarding the responsibility of nurses to meet the needs.

Norris and Grove (1986) conducted a descriptive study to investigate the perceptions of family members and critical care nurses concerning selected psychosocial needs of family members of critically ill adult patients hospitalized in an intensive care unit (ICU). In this study 20 family members and 20 nurses completed a revised version of the Critical Care Family Needs Inventory (CCFNI) (Molter & Leske, 1983). Results from this study indicated a difference between the perceptions of the family members and the nurses in the identification of importance of psychosocial needs.

Three of the four highest ranking needs dealt with the need for information and were highly ranked by both families and nurses. However, nurses ranked these informational needs higher than did family members. The needs "to feel that the patient was receiving the best possible care" and "to feel there was hope" were rated lower by nurses than by family members.

Forrester, Murphy, Price, and Monaghan (1990) explored the relationship between critical care family members' perceived needs and the assessment of these needs by intensive care unit nurses. Family needs were measured by using the CCFNI (Molter & Leske, 1983). Data consisted of responses obtained from 92 family members of adult patients hospitalized in an intensive care unit and 46 ICU nurses providing direct care for these patients.

Significant differences were detected between family members' perceptions and ICU nurses' assessment of the importance of 15 (50%) of the critical care family needs studied. The results of this study suggest that family members and ICU nurses differ significantly in the perception of the least important and most important family needs (Forrester et al., 1990).

Several investigators have examined how the needs of family members vary in importance according to various personal, situational, and demographic factors. Factors reported as having an influence on the importance of needs as perceived by family members include: age of the patient, age of the family member (Molter, 1979; Stillwell, 1984), relationship to the patient (Gillis, 1984), patient diagnosis (Mathis, 1984), socioeconomic status (Molter, 1979), family perception of the severity of illness (Stillwell, 1984), time since the patient's admission (Bouman, 1984), and sex of the family member (Stillwell, 1984). Significant differences in the ranking of needs across samples have been

found among these studies, although the top 15 needs do not appear to differ in content.

Needs of Families With Critically Ill Member--Specific Disease or Injury

Skelton and Dominian (1973) found that wives (N = 65) of men admitted to a coronary care unit expressed feelings of loss, depression, anxiety, and guilt at the time their husbands suffered a myocardial infarction (MI). These wives reported psychosomatic symptoms related to the illness, including headaches, stomach pains, faintness, and heart symptoms such as chest pains, tightness, or palpitations. In addition, the wives reported difficulty with adjustment during the convalescent period and up to 1 year following the husband's MI. It was believed that attitudes toward an MI were formed by the wives during the initial contact period in the CCU and these attitudes were very difficult to change later.

The findings of Skelton and Dominian (1973) were supported in a similar study in which wives were found to have substantial and persistent psychological symptoms comparable to those observed in the patients (Mayou, Foster, & Williamson, 1978). The wives (N = 82) were found to be more distressed than their husbands in the first hours following MI. Wives initially experienced a sense of numbness, feelings of unreality, and dependency on others. Anxiety, crying, and disturbances of sleep and appetite were found to be the most common symptoms. During the period of convalescence, the

wives experienced feelings of anxiety, depression, fatigue, irritability, poor concentration, and insomnia.

Reddish and Blumenfield (1984) investigated the psychological and emotional responses of wives (N = 25) when their husbands were severely burned. Within the first 24 - 72 hr post-burn, the wives experienced feelings such as panic, disorganization, and the fear of loss of the spouse, regardless of the actual extent of the injury. During days 3 - 14, spouses experienced acute symptoms such as sleep disturbances, anorexia, anxiety, crying, and nightmares. In addition, the wives reported feelings of helplessness and guilt and exhibited behaviors associated with depression, anger, dependency, and suspiciousness. Even when the injuries of the husbands were not life-threatening, grief responses were observed in the wives. During this time the wives expressed little concern for their own well-being. The findings were interpreted by the investigators from a grief-loss, stress-crisis perspective.

Gillis (1984) investigated the major sources of stress identified by patients and spouses during hospitalization for and recovery from coronary artery bypass surgery. This longitudinal descriptive study (N = 71) sampled a group of 61 male and 10 female patients and their spouses at the time of hospitalization for surgery and again 6 months following surgery. Based on the data from this study, the role of the spouse was found to be associated with significantly higher reports of subjective stress than the role of patient, even when sex, family membership, and role were considered as

variables. Waiting for surgery, perceived lack of control of hospital events, lack of privacy, misinformation and lack of information, and physical and emotional fatigue were cited as major stressors by spouses in this sample. Many needs were reported as unmet by the family and the patient.

Bedsworth and Molen (1982) examined psychologic distress in spouses (N = 20) of patients with MI. During the first 72 hr after admission to the CCU, the greatest stress reported by the spouses was related to the threat of loss of a mate by death and/or the loss of a healthy mate by disease. Additional threats reported by the spouses included fear of recurrence of the patient's MI, financial insecurity, family role changes, and increased susceptibility to illness in the spouse who had not suffered an MI. Anxiety was the predominant affective mood state identified by the spouses of patients with an MI. Fear, depression, helplessness, anger, guilt, and shame were additional stress reactions reported by these spouses.

Boykoff (1986) investigated visitation needs reported by patients with cardiac disease and their families. Results of this study suggest that the nurse plays a pivotal role in critical care visitation. The three themes that emerged from the data regarding the role of the nurse were communicator, gatekeeper, and absolute care provider.

Spatt, Ganas, Hying, Kirsch, and Koch (1986) investigated informational needs of family members (N = 25) of critically ill patients. A questionnaire was used that incorporated a slight variation of the CCFNI (Molter & Leske,

1983). Data revealed that family members wanted questions answered honestly, specifically, and clearly. They needed to know the patient's prognosis, to feel that providers had hope for the patient's recovery, or to discuss the possibility of the patient's death.

Artinian (1989) conducted an exploratory field study that combined qualitative and quantitative methods to learn more about family stress associated with cardiac surgery. The study provides data for some understanding about what families experience when a member has coronary artery bypass surgery. The data suggest that cardiac surgery is a family threatening experience--it threatens the loss of a member and drastically alters the makeup of a previously intact family system.

Summary

Findings from investigations of adult family members of critically ill patients suggest that these family members have needs, they are able to prioritize their needs, and some of their needs are not being met. Clusters of family needs based on similarity were consistently identified as important by most family members across many different samples and studies (Hickey, 1990).

In all of the studies in this review, information was most frequently identified by families as among their most important needs. Because informational needs appear to be most important to families, it is essential that nursing develop a scientific body of knowledge to guide nursing interventions in meeting family informational needs.

Relatively little research has been done in the area of nursing interventions for families of intensive care patients (Artinian, 1989).

The majority of the research studies were conducted in medical centers or teaching hospitals. They represented a variety of geographic locations in the United States. Most studies limited the descriptions of their settings to generalities. Some studies included descriptions about the types of patients cared for. Most offered no description of nursing practices or hospital philosophy that could potentially affect family needs, such as the critical care unit's overall philosophy about families, the role families played in the unit, the family visiting policy, or location and condition of family waiting rooms. This lack of information makes application of research findings to practice difficult (Hickey, 1990).

Characteristics of patient and family samples utilized in the studies were poorly described. Studies need to include patient diagnosis, severity of illness, and patient's and family member's ages. Small samples of convenience limit the generalizability of results. Most studies utilized a descriptive research design. Application of only one research method may result in a limited perspective of knowledge. Most of the research studies collected data from females with a male family member in a critical care unit. Timing at introduction of the instrument varied from a few hours to several days post admission.

In spite of the limitations within the studies, recurring needs seem to be identified. Several needs, some of which were similar in nature, were consistently identified as important by most family members across many different studies (Hickey, 1990). Based on this knowledge, nursing research now needs to be directed toward designing and investigating nursing interventions in relationship to family need satisfaction.

CHAPTER III

METHODOLOGY

The purpose of this experimental study was to compare the effects of usual, support, and informational nursing interventions on the extent to which family members of critically ill patients perceived their needs were met. The procedure for data collection in this study closely resembles the procedure utilized in previous studies related to identification of family needs (Leske, 1986; Molter, 1979). This chapter presents the design of the study, definition of terms, instrument, subjects, limitations of the study, and plans for data analysis.

Design of the Study

An experimental design was utilized to address the research hypotheses. A total of 60 family members included in this study were divided into three groups, each containing 20 family members. Family members in the first group received the usual nursing interventions from staff nurses. This group was labeled "Usual Nursing Intervention" group. The second group received the usual nursing staff intervention plus a nursing intervention by the researcher designed to offer concern and interest. This group was labeled "Support Nursing Intervention." The third group received the usual nursing staff intervention plus a nursing intervention

by the researcher designed to offer support and answer informational needs of the family. This group was labeled "Informational Nursing Intervention."

The researcher had two interactions with each family member in this study. The first interaction occurred 24 hr after admission of the family member to a critical care area. The Critical Care Family Needs Inventory (Molter & Leske, 1983) was utilized to assess how the family member rated the importance of each need item. The family member then received either the Usual, Support, or Informational Nursing Intervention.

The second interaction occurred 48 hr after admission of the family member. The one most significant family member was asked to complete an adapted version of the CCFNI to measure the extent to which the family member perceived his/her needs were met.

The control group in this study was families receiving the Usual Nursing Intervention. The experimental groups were families that received either the Support or Informational Nursing Intervention. The independent variable was the type of nursing intervention, and the dependent variable was the extent to which family members perceived their needs were met.

The following diagram further explains the experimental design of this study. The treatments are represented by T_1, T_2, and T_3. The dependent variable is represented by X.

Group	Nursing Intervention	1st Intervention 24 hr	2nd Intervention 48 hr	Perceived needs met
1	Usual	T_1	T_1	X
2	Support	T_2	T_2	X
3	Informational	T_3	T_3	X

Figure 2: Design of experimental study

Definition of Terms

For the purposes of this study, the following terms are defined:

Family - individuals of a basic societal unit in which members have a commitment to nurture one another emotionally and physically. In this investigation, a family member is delimited as an adult, 18 years of age or older, who is identified by other family members in attendance as the most significant family member to the patient.

Most significant family member - individual selected by the family unit to be most knowledgeable and representative of family needs resulting from the hospitalization of the critically ill family member.

Family perceptions - the cognitive insight and belief of the most significant family member relating to the extent to which family needs had been met.

Need - a requirement of a family member which, if not met, becomes a demand that has the potential of producing distress in the family member (Leske, 1986). Operationally defined, a need is any 1 of the 45 statements appearing on

the Critical Care Family Needs Inventory (Molter & Leske, 1983).

Need importance - the numerical rating (0 - 4, not important to very important) on the CCFNI regarding the importance of a particular need.

Extent to which their needs were met - the numerical rating (0 - 4, never met to always met) assigned by the family member to items on the CCFNI (Molter & Leske, 1983).

Usual Nursing Intervention - the usual attention, information, and support provided for the family by the nursing staff following admission of a patient to a critical care area.

Support Nursing Intervention - a specifically designed intervention, conducted by the researcher, designed to show interest and concern in family members. The researcher asked identical questions in both experimental groups that were designed to allow family members to express their perceptions and feelings related to the unexpected hospitalization of a family member in a critical care unit.

Informational Nursing Intervention - a specifically designed intervention, conducted by the researcher, related to relevant facts concerning the illness and treatment of the family member in the critical care area. Four broad informational needs utilized in this intervention were derived from factor analysis psychometrics (Leske, 1988) (Appendix A).

Critically ill family member - a patient admitted to a critical care unit because of a life-threatening or potentially life-threatening alteration in a physiological system(s).

Critical care unit - a special care unit structurally and functionally designed according to generally accepted standards to facilitate the care of the critically ill patient.

Instrument

Data were collected in this study by means of a three-part instrument. The researcher obtained facts related to date and time of admission, patient diagnosis, and location of the unit from the chart and Kardex.

The first part of the instrument (Appendix B) was designed to collect demographic data. A combination of checklist and fill-in-the-blank items was used to obtain a variety of information concerning individual characteristics. The information requested was based upon a literature search of personal and situational variables that may influence needs experienced by a family member when a relative is critically ill.

The second part of the instrument (Appendix C) consisted of the Critical Care Family Needs Inventory (Molter & Leske, 1983). This inventory contains 45 family need statements developed through a literature review related to family needs. The CCFNI presents the need statements to be rated on a 4-point Likert-type scale (1 = not important, 2 = slightly important, 3 = important, and 4 = very important).

The instrument contains one open-ended item that asks family members to write in additional information.

The third part of the instrument (Appendix D) measured how families perceived their needs had been met. Although the CCFNI did not incorporate a column for determining whether or not needs have been met, permission was obtained from the authors to adapt the instrument to obtain data pertaining to how well needs had been met (Appendix E). The adapted version of the CCFNI developed for use in this study has four response columns for each need statement. Each need statement was rated on a 4-point Likert-type scale (1 = never met, 2 = sometimes met, 3 = usually met, and 4 = always met).

Psychometric evaluation of the CCFNI on 677 family members of the critically ill revealed a 5-factor analysis with a varimax rotation. The 5-factor solution was determined to best represent the original correlations. The factors were labeled needs for support, comfort, information, proximity, and assurance (Leske, 1988).

Reliability

Internal consistency of the CCFNI was evaluated by utilizing Cronbach's coefficient alpha. The alpha reliability coefficients all exceeded the standard of .70 cited by Nunnally (1978) and therefore show support for homogeneity of the instrument. Item to total correlations have not been examined to determine if any items should be eliminated from the scale (Leske, 1988).

Validity

Content validity for the CCFNI was initially established by a panel of experts and a literature review of family needs (Molter, 1979). Numerous researchers have used expert panels to further support content validity (Daley, 1984; Kirschbaum, 1983; Leske, 1986; Powell, 1984). Evaluation criteria included clarity of statements, specificity of directions, ease of questionnaire completion, and appropriateness of content for the family of the critically ill. These expert panel members found the tool to meet the evaluation criteria and to be relevant to family members of critically ill patients (Leske, 1988).

Versions of this instrument have been used widely in adult critical care nursing research, further supporting its content validity as a measure of family needs associated with hospitalization of a relative in an adult intensive care unit. It has been reported that family members do not report additional needs on the open-ended item, which is also supportive of the content validity of the CCFNI (Krumberger, 1985; Leske, 1986).

Psychometric properties of the tool (Leske, 1988) revealed that items on the CCFNI had item-total correlations between .25 and .60, indicating they were relatively homogeneous. The internal consistency alpha coefficient was .92. Factor analysis resulted in a 5-factor solution as determined by eigenvalues greater than one. All 45 items had a significant loading on one of the five identified factors.

Results of the psychometric studies support the use of this instrument in research and clinical practice (Leske, 1988).

Subjects

The subjects of this study consisted of a nonprobability sample of 60 most significant adult family members of patients admitted to a critical care unit. The following criteria were utilized in determining eligibility of families to participate in the study:

1. The patient must be between 18 and 70 years of age and must not have a chronic physical condition requiring previous hospitalization in a critical care unit.

2. The admission to the critical care unit must be subsequent to a sudden acute injury or illness resulting in actual or potential physiological alterations that could be life threatening. Sudden injuries or illnesses do not afford families adequate time to prepare for this event.

3. Families will not be included if the most significant family member has had a recent experience with critical care units with a close family member. These families were not included because their past experience would introduce variability.

4. The family member must be 18 years of age or older and may be a spouse, parent, adult child, significant relative, or any other individual who is important to the family function, or any combination of these.

5. The family member must be identified by the family members as the most significant family person.

6. The family member must be willing to meet with the researcher each day for 2 days.

The 60 families selected for this study were randomly assigned to one of the three groups to receive the designated nursing intervention. Random assignment was achieved by placing three slips of paper in a cup. Each slip was labeled variously as Usual Intervention, Support Intervention, or Informational Intervention. As each slip was selected the family was placed in the group identified on the paper. That slip of paper was not returned to the cup until all three slips of paper had been utilized in placing families. If a family decided not to participate in the study, or withdrew from the study before completion, the slip of paper identifying the nursing intervention was returned to the cup at that time.

Families were selected for the study as described previously. All families were approached by the researcher in the family waiting room at approximately 24 hr post-admission of the family member to a critical care unit. Following a brief explanation of the study, each family was given a written description of the study that included the name and phone number of the researcher (Appendix F).

Staff nurses in the intensive care unit and coronary care unit were contacted by the researcher on a regular basis to determine if patients had been admitted who met the criteria established for inclusion in this study. As families were identified, the researcher met with each family to determine if they had previous experience in dealing with

hospitalization of a family member in a critical care unit. The researcher explained the study to families that met the criteria and allowed the family to select the most significant family member.

Procedure

The setting for this study was a 400-bed acute care hospital located in the Southeast. The facility, a designated Level II Trauma Center, is in close proximity to a large state park and recreational lake area and consequently admits many trauma patients. The hospital has a 12-bed intensive care unit and a 12-bed coronary care unit. The average weekly admission rate for each of these units is 30.

The researcher had meetings with department directors to explain the study and criteria for selecting families to participate in the study. Staff meetings were utilized for the researcher to meet and educate the staff nurses. A list identifying the eligibility requirements for families was posted in the report areas to remind staff nurses of the study and further reinforce the criteria.

Usual Nursing Intervention

The most significant family members in the control group that received the Usual Nursing Intervention met with the researcher approximately 24 hr post admission of the family member. After agreeing to participate in the study, each family member completed the Demographic Data Tool and the CCFNI (Molter & Leske, 1983). The family member then received the Usual Nursing Interventions from the staff nurses as previously described.

The researcher met again with the most significant family member in this control group approximately 24 hr later. At this time the most significant family member completed the adapted version of the CCFNI to determine the extent to which he/she perceived his/her needs were met. The researcher did not in any way attempt to offer support or information to the most significant family members in this group.

Prior to termination of contact by the researcher, the most significant family member was asked if he/she had any questions regarding circumstances surrounding the hospitalization of the relative in the critical care unit. This question was asked in case the family member had a question or concern stimulated from the reading of items on the questionnaire. A family member who expressed concerns or problems was informed of available institutional supports. For ethical reasons, family questions, concerns, and problems could not be disregarded.

Support Nursing Intervention

Family members in the experimental group receiving the Support Nursing Intervention also met with the researcher approximately 24 hr after admission of the family member to the critical care unit. After agreeing to participate in the study, the most significant family member completed the Demographic Data Tool and the CCFNI (Molter & Leske, 1983). These family members then received the Support Nursing Intervention, which was based on a qualitative study investigating family stress associated with cardiac surgery

(Artinian, 1989). The questions employed for this intervention were the following:

1. What particular problems or concerns have you had related to your family member's hospitalization?

2. What changes in your family responsibilities have you had to make as a result of this hospitalization?

3. What is most helpful for you now?

4. What is most difficult for you now?

5. What advice would you give to others undergoing the same experience?

Family members in this group received the Usual Nursing Interventions from critical care staff nurses in addition to the Support Nursing Intervention from the researcher.

The family member in this group met again with the researcher approximately 24 hr after the initial intervention. The Support Nursing Intervention was again instituted, showing concern and support for these families. Each family member then completed the adapted version of the CCFNI to determine the extent to which he/she perceived his/her needs were met.

Although subjective data were obtained from this group, these data will not be reported in this study. Prior to termination of contact by the researcher, families in this group expressing concerns, questions, and problems were also informed of available institutional support.

Informational Nursing Intervention

Families in the experimental group that received the Informational Nursing Intervention met with the researcher

approximately 24 hr after admission of the family member to the critical care unit. After agreeing to participate in the study, the family member completed the Demographic Data Tool and the CCFNI (Molter & Leske, 1983). The families then met with the researcher to determine their individual informational needs. These informational needs were limited to the four broad informational needs with the highest correlation to the factor labeled "Information" from the psychometric evaluation of the CCFNI (Leske, 1988) (Appendix A). The four needs utilized in this study were:

1. to know why things are done for the patient,

2. to know how the patient is being treated medically,

3. to know exactly what is being done for the patient, and

4. to know about the type of staff members taking care of the patient.

Data needed for the researcher to provide the Informational Nursing Intervention were obtained by reviewing the chart, Kardex, and Medication Administration Record; listening to the change-of-shift report; and asking questions of the staff nurse caring for the patient as necessary. The researcher used a checklist of possible informational needs of families based on previously published research. Although the checklist provided structure, the researcher individualized this intervention by providing information only if the family member indicated an interest.

Families in this group also met again with the researcher approximately 24 hr after the initial intervention. The appropriate nursing intervention was again directed toward meeting the families' informational needs. After the completion of the Informational Nursing Intervention, each family then completed the adapted version of the CCFNI to determine the extent to which they perceived their needs were met.

Families in the Informational Nursing Intervention group received the Usual Nursing Intervention from the staff nurses. Prior to termination of contact by the researcher, families expressing concerns, questions, and problems were also informed of available institutional support.

Protection of Human Subjects

Permission to conduct the study was obtained from the Institutional Review Board for Human Use at the University of Alabama at Birmingham (Appendix G). Informed written consent was obtained from the Vice-President of Nursing and the Chief Executive Officer of the clinical site (Appendix H). The family member was informed of the nature and purpose of the study, and completion of the questionnaire denoted consent to participate.

Confidentiality of subjects was assured by utilizing a coding system for collection and tabulation of data. Subjects were given the option of withdrawing from participation at any time until completion of part 3 of the evaluation tool, with the assurance that doing so would in no way affect the care received by the patient or family members.

Subjects were also informed that there were no identified risks or benefits associated with participation.

Families receiving the Usual Nursing Intervention were informed that their time commitment would be approximately 10 min for each of the two different sessions with the researcher. Families receiving the Support Nursing Intervention were informed that the time commitment would be approximately 20 min for each of the two sessions with the researcher. Families receiving the Informational Nursing Intervention were informed that the time commitment would be approximately 30 min for each of the two meetings with the researcher.

Limitations

Because self-report paper-and-pencil questionnaires were used for data collection, it was assumed that the families participating would accurately describe their needs. The limitation inherent in this assumption is that response bias by subjects in completing self-report measures has been demonstrated (Sax, 1980).

Data were collected in one hospital (400 bed capacity) located in the Southeast. Because only one facility was utilized in this research, the generalizability of the findings from this study is limited.

A variable that could not be controlled was contamination between the groups of families. Although the interactions between families and the researcher took place in a private room, families returned to the general family waiting rooms. The extent to which their interactions

influenced how the family member perceived his/her needs to have been met is not known.

Families may have been reluctant to indicate honestly the extent to which they perceived their needs were met. It is possible that families may have feared that revealing their honest perceptions of many unmet needs could have resulted in recriminations from the nursing staff.

Analysis

The data obtained from the subjects were numerically coded for data analysis according to accepted computer techniques. Descriptive and inferential statistics were performed on the data using the research and computer resources. The statistical package employed for data analysis was the Statistical Analysis System (SAS) (SAS Institute, Inc., 1985).

Initial analyses focused on determining if the groups were similar before any nursing interventions were applied. A series of analyses of variance compared the groups on demographic variables and their perceived importance of needs to determine if posttest comparisons were valid. Any identified differences between the groups were controlled statistically by using analysis of covariance.

A factor analysis (Leske, 1988) of the 45 family needs of the CCFNI resulted in the following factors: support, comfort, information, proximity, and assurance. Each of the 45 family need items was statistically assigned to one of these five factors (Appendix A).

The researcher created five subscales, or dependent variables, for each family. The dependent variables for each family were operationally defined as the sum of the responses to all family need items correlated with the various needs of support, comfort, information, proximity, or assurance. This analysis allowed the researcher to identify how each family rated the importance of the five need areas and the degree to which the family perceived that these needs were met.

Two additional dependent variables consisted of a total global score on family importance of needs and a total global score on degree to which needs were met. Each of these global scores consisted of the sum of the responses to all 45 needs.

The strategy applied to assess the effect of nursing interventions consisted of two planned orthogonal contrasts. The first assessed the difference between the control group receiving usual nursing interventions and the combined support and information experimental groups to assess the effect of intervention versus no intervention. The second contrast was between Support Nursing Intervention and Informational Nursing Intervention to determine if there was a difference between the two nursing interventions.

CHAPTER IV

PRESENTATION OF FINDINGS

An analysis of the data is presented in this chapter. The purpose of this experimental study was to ascertain if there is a difference in perceptions of families with a critically ill family member regarding the extent to which their needs were perceived as met subsequent to Usual, Support, and Informational Nursing Interventions. The independent variable in this study was the nature of the nursing intervention. The dependent variables were the extent to which families perceived their needs were met in the categories of support, comfort, information, proximity, and assurance. The families were randomly assigned into three groups. The control group received the usual staff nursing intervention. Families in one experimental group received the Support Nursing Intervention, and families in the other experimental group received Informational Nursing Intervention.

Description of the Subjects

The study sample consisted of 60 family members. Only one potential family declined to participate in the study. This refusal to participate may have resulted from the critical condition of the family member. Six families withdrew prior to completion of the study. Reasons for withdrawal

included death of the patient (3), transfer of the patient out of the facility or out of the critical care area (2), and failure of the family member to keep a scheduled appointment with the researcher (1). Table 1 summarizes the demographic characteristics of the study sample.

Table 1

Demographic Data Related to Family Members

Demographic variable	Frequency	Percentage
Sex of family member		
Female	42	70.0
Male	18	30.0
Sex of patient		
Female	24	40.0
Male	36	60.0
Relationship to patient		
Spouse	35	58.3
Sibling	3	5.0
Parent	12	20.0
Child	9	15.0
Nephew	1	1.7
Miles lived from hospital		
0 - 10	23	38.3
11 - 30	20	33.3
31 - 50	8	13.3
51 - 75	5	8.3
76 - 100	3	5.0
Perceived severity of illness		
Good	6	10.0
Fair	13	22.0
Serious	23	38.0
Critical	18	30.0
Education level of family member		
< 7th grade	2	3.3
Junior high school	3	5.0
Partial high school	9	15.0
High school graduate	29	48.3
College graduate	8	13.3
Graduate of professional training	8	13.3

Table 1 (continued)

Demographic variable	Frequency	Percentage
Age of family members		
15 - 25	3	5.0
26 - 40	20	33.3
41 - 60	29	48.3
61 - 70	8	13.3
Age of patient		
15 - 25	9	15.0
26 - 40	17	28.3
41 - 60	22	36.7
61 - 70	12	20.0
Hours post admission		
8 - 19	22	36.7
20 - 28	17	28.3
29 - 48	16	26.7
49 - 72	5	8.3

Hours post admission reflect the length of time between the patient's admission and initial data collection by the researcher. Initial contact ranged from 8 - 72 hr, with a mean of 29 hr. None of the family members had a prior experience with a close relative in an intensive care unit. Most rated the severity of the patient's condition at the time of data collection as serious (38%) or critical (30%). Less than one-third rated their relative's condition as good (10%) or fair (22%). These findings were expected, considering the eligibility criteria for this study and the acuity of patients admitted to the critical care units.

Ages of the patients ranged from 15 - 72 years, with a mean of 46 years. There were 24 female and 36 male patients. Patients' medical diagnoses varied greatly, as

would be expected from the utilization of intensive and coronary care units. Patient medical diagnoses included cerebral aneurysm, closed head injury, epidural hemorrhage, trauma of multiple causes, myocardial infarction, congestive heart failure, coronary artery disease, post-thoracotomy surgery, post-hanging suicide attempt, pneumonia, and respiratory failure.

Descriptive statistics of demographic data were used to determine the means and standard deviations of families' educational level, perception of patient's condition, age of family member, miles lived from hospital, relationship to patient, sex of family member, and sex of patient. Table 2 summarizes the means and standard deviations of each variable of the family groups receiving Usual, Support, and Informational Intervention.

Demographic data were analyzed further to determine differences between the control group receiving the usual staff interventions and the combined experimental groups receiving the nursing interventions. Table 3 summarizes the means and standard deviations of demographic data for these comparisons.

To determine whether there were differences among the three treatment groups on demographic variables, a series of analyses of variance was performed. These analyses revealed that there were no significant differences among the three groups on the demographic variables.

Table 2

Comparison of Means and Standard Deviation of Usual, Support, and Informational Intervention Groups

Demographic Variable	Usual Intervention $\bar{X}$	SD	Support Intervention $\bar{X}$	SD	Informational Intervention $\bar{X}$	SD
Sex of family member	(n=20) 1.20	0.41	(n=20) 1.25	0.44	(n=20) 1.45	0.51
Sex of patient	(n=20) 1.75	0.44	(n=19) 1.63	0.49	(n=20) 1.55	0.51
Relationship to patient	(n=19) 1.42	0.50	(n=18) 1.61	0.50	(n=19) 1.21	0.41
Miles lived from hospital	(n=20) 20.15	44.36	(n=19) 19.78	13.51	(n=20) 49.70	96.06
Educational level	(n=20) 3.60	1.31	(n=19) 4.42	1.21	(n=20) 4.05	1.14
Condition of patient	(n=20) 2.80	0.95	(n=20) 2.85	0.87	(n=20) 2.95	1.05
Age of family member	(n=20) 46.00	14.79	(n=19) 43.15	12.04	(n=20) 46.85	11.68

Note: None of the variables was significantly different at the .05 level of significance.

Subscales

The researcher computed five subscale scores for each family member on the five subscales based on Leske's (1989) factor analysis of the 45 family need items on the CCFNI. These subscales were defined as need for support, assurance, information, proximity, and comfort. Subscale scores were computed for the pretest score and posttest scores. This was necessary to determine whether the groups were equivalent before the nursing interventions were applied.

Table 3

Comparison of Demographic Data of Usual vs. Support and Informational Intervention Groups

Demographic Variable	Usual Intervention $\bar{X}$	SD	Support & Informational Intervention $\bar{X}$	SD
Sex of family member	(n=20) 1.20	0.41	(n=40) 1.35	0.48
Sex of patient	(n=20) 1.75	0.44	(n=39) 1.58	0.49
Relationship to patient	(n=19) 1.42	0.50	(n=37) 1.40	0.49
Miles lived from hospital	(n=20) 20.15	44.36	(n=39) 35.12	70.21
Educational level	(n=20) 3.60	1.31	(n=39) 4.23	1.18
Condition of patient	(n=20) 2.80	0.95	(n=40) 2.90	0.95
Age of family member	(n=20) 46.00	14.79	(n=39) 45.05	11.85

Note: None of the variables was significantly different at the .05 level.

The pretest subscale score for informational needs is the sum of responses on each of the eight items correlated with this need. During the pretest at 24 hr after admission, families rated the importance of each of these needs. During the posttest period the family member rated the extent to which he/she perceived his/her needs had been met. This procedure for obtaining pretest and posttest subscales also was utilized for each of the remaining four areas of support, assurance, proximity, and comfort.

Planned Orthogonal Contrasts - Pretest

The strategy to assess the effect of nursing interventions consisted of two planned orthogonal contrasts. The control group receiving usual nursing interventions was labeled Usual Nursing Intervention. The experimental groups were labeled Support Nursing Intervention and Informational Nursing Intervention.

Planned orthogonal contrasts were run on each of the five pretest subscales to determine if the groups differed on the extent to which needs were perceived as important. Comparisons were made between the group receiving Usual Nursing Intervention and the combined groups receiving Support Nursing Intervention and Informational Nursing Intervention. A comparison was also made between the two experimental groups of Support Nursing Intervention and Informational Nursing Intervention. Data from these comparisons are reported in Table 4.

The planned orthogonal contrasts of pretest subscale scores demonstrated that there was no significant difference between the usual nursing intervention group and the combined groups receiving support and informational interventions. This comparison was necessary to assure validity of posttest comparisons.

A sixth pretest total score was created that included a sum of all scored responses for the 45 need items for each family. This score was labeled "Total Global Needs Score." A Total Global Needs Score was determined for the pretest

Table 4

Planned Orthogonal Contrasts of Pretest Scores

Need	F Value	PR
Support		
Usual vs. support & informational	2.15	0.1482
Support vs. informational	0.02	0.8820
Comfort		
Usual vs. support & informational	1.55	0.2180
Support vs. informational	0.07	0.7884
Information		
Usual vs. support & informational	1.58	0.2138
Support vs. informational	0.70	0.4051
Proximity		
Usual vs. support & informational	0.26	0.6125
Support vs. informational	0.87	0.3537
Assurance		
Usual vs. support & informational	0.02	0.9009
Support vs. informational	0.19	0.6665

No significant differences were noted at the .05 level of significance.

and posttest scoring. Orthogonal contrast of pretest Total Global Needs Score is presented in Table 5.

The analysis of orthogonal contrasts of pretest Total Global Needs Score illustrates no significant differences between the groups on the extent to which the family member perceived the importance of needs during the pretest period. Both orthogonal contrasts illustrate that there was no significant difference between the groups if analyzed individually by the five broad need areas or in total combination of the 45 family need items.

Table 5

Orthogonal Contrasts of Pretest Total Global Needs Score

Global Needs	F Value	PR
Score		
Usual vs. support & informational	1.60	0.2112
Support vs. informational	0.01	0.9353

Planned Orthogonal Contrasts - Posttest

The strategy to assess the effect of nursing interventions consisted of planned orthogonal contrasts on posttest scales. The five posttest scales for each family were used to compare how the family member perceived his/her needs were met. Contrasts were made between the control group receiving Usual Nursing Intervention and the combined groups receiving Support and Informational Nursing Intervention to determine whether the nursing intervention had a significant effect on the extent to which the family member perceived his/her needs were met. Contrasts between Support Intervention and Informational Intervention were made to determine whether there was a significant difference between these groups. Table 6 illustrates the results of these orthogonal contrasts.

Significant differences were noted on orthogonal contrasts of posttest scores of extent to which families needs were rated as met. No significant effects were noted on contrasts of support, comfort, and assurance. Significant effects were noted on contrasts of information and proximity

Table 6

Orthogonal Contrasts of Extent to Which Needs Were Rated as Met

Need	F Value	PR
Support		
Usual vs. support and informational	2.37	0.1189
Support vs. informational	0.48	0.4894
Comfort		
Usual vs. support and informational	1.86	0.1774
Support vs. informational	0.64	0.4256
Information*		
Usual vs. support and informational	4.67	0.0340
Support vs. informational	0.78	0.3814
Proximity*		
Usual vs. support and informational	4.90	0.0308
Support vs. informational	0.51	0.4781
Assurance		
Usual vs. support and informational	2.70	0.1056
Support vs. informational	0.69	0.4099
Total global need score*		
Usual vs. support and informational	4.32	0.0422
Support vs. informational	0.83	0.3664

*Significant differences noted at the .05 level of significance.

needs. Both contrasts of extent to which families rated needs met differed significantly in Usual Intervention vs. Support and Information Intervention. The nursing intervention had a significant effect on the extent to which families rated their needs as having been met. However, the two nursing interventions did not significantly differ on the extent to which families rated their needs as having been met.

Orthogonal contrasts of the Total Global Need score demonstrated a significant effect of the nursing intervention but no significant difference between Support Nursing Intervention and Informational Nursing Intervention. Information needs and proximity needs were responsible for the differences in these contrasts.

Means and Standard Deviations of Met Needs by Groups

Average score values and standard deviations of the five subscales reflecting the extent to which families perceived their needs were met were determined to examine the actual differences between the groups. Table 7 presents the data according to Usual Nursing Intervention, Support Nursing Intervention, and Informational Nursing Intervention.

Table 7

Average Subscale Values for Perceived Met Needs of All Groups

Need	Usual X	Usual SD	Support X	Support SD	Informational X	Informational SD
Assurance	3.41	0.548	3.58	0.501	3.72	0.548
Comfort	3.32	0.463	3.45	0.576	3.58	0.447
Proximity	3.11	0.583	3.37	0.482	3.49	0.504
Information	2.92	0.573	3.21	0.687	3.38	0.654
Support	2.66	0.657	2.89	0.749	3.06	0.809
Total Score	3.09	0.476	3.30	0.513	3.45	0.524

Scale range 1-4.

All needs were rated more highly met by the Informational group than by the Support or Usual group. The least

difference (0.26) was noted between the Usual and Informational groups on the subscale of Comfort. The greatest difference (0.46) was also noted between the Usual and Informational groups on the subscale of Information. The Total Global Need score difference between the Usual and Informational groups was 0.36.

Average score values and standard deviations of the five subscales of the extent to which family members perceived needs were met were examined to determine the actual differences between the control group receiving Usual Nursing Intervention and the combined experimental groups receiving Support and Informational Nursing Intervention. Table 8 presents the data by the appropriate groups.

Table 8

Average Subscale Values for Perceived Met Needs of Usual Nursing Intervention and Combined Support and Informational Groups

Need	Usual		Support and Informational	
	X	SD	X	SD
Assurance	3.41	0.548	3.65	0.523
Comfort	3.33	0.463	3.51	0.513
Proximity	3.11	0.583	3.43	0.490
Information	2.92	0.574	3.30	0.668
Support	2.66	0.657	2.97	0.774
Total Score	3.09	0.476	3.37	0.517

Scale range 1-4.

The least difference noted (0.18) was on the subscale of Comfort, and the greatest difference noted was on the subscale of Information (0.38). Total Global Need scores differed by 0.28.

Hierarchy of Need Importance and Perceived Met Needs

Means and standard deviations of the five subscales of need areas were computed to identify a hierarchy of family needs (Table 9) and the extent to which families perceived needs were met (Table 10). This analysis was done to determine whether nursing interventions were meeting the needs families rated as most important.

Table 9

Needs of Family Members Ranked in Order of Need Importance by Item Means

Need	Mean	SD
Assurance	3.85	0.205
Information	3.50	0.388
Proximity	3.33	0.383
Comfort	3.15	0.584
Support	2.85	0.502
Total Global Score	3.34	0.335

Scale range 1-4.

Family members rated the need for assurance as the most important need and the need for support as the lowest need. The total variance of item ranking by the 60 families was 1.00.

Means and standard deviations were determined on the extent to which the family member perceived the five sub-scales of needs were met (Table 10).

The need for assurance was ranked as most important and was also perceived as the need most highly met. The need for information was ranked as second most important and was ranked as fourth in the needs perceived as met. The means for proximity, comfort, and support were almost identical in their importance rating by family members on the extent to which they perceived those needs to have been met.

Table 10

Needs of Family Members Ranked in Order of Perceived Met Needs by Item Means

Need	Mean	SD
Assurance	3.57	0.539
Comfort	3.45	0.501
Proximity	3.32	0.539
Information	3.17	0.658
Support	2.87	0.746
Total Global Score	3.28	0.518

Scale range 1-4.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

The purpose of this experimental study was to compare the effects of usual, support, and informational nursing interventions on the extent to which family members of critically ill patients perceived their needs were met. This chapter presents a summary of the findings and a discussion of the findings in relationship to the conceptual framework, the review of research, and the design of this study. In addition, conclusions and recommendations for future research are addressed.

Findings

Summary of Findings

The major findings of the present research are as follows:

1. A series of analyses of variance revealed no significant differences among the three groups on the demographic variables.

2. Planned orthogonal contrasts revealed no significant differences between the groups on the extent to which the family member rated the importance of the family needs.

3. Planned orthogonal contrasts revealed significant differences in the extent to which the family member

perceived needs were met between the group receiving the usual nursing intervention and the combined groups receiving support and informational nursing interventions.

4. Planned orthogonal contrasts revealed no significant differences in the extent to which the family member perceived needs were met between the support and informational groups.

5. Average subscale values on the extent to which family members perceived needs were met were highest for the experimental groups receiving the informational or support nursing intervention.

The Theoretical Framework

Family Systems Theory and the Neuman Systems Model provided a satisfactory framework for this study. The sudden hospitalization of a family member in a critical care unit was a stressful event for the family. Many of the concerns and questions expressed by family members during their time with the researcher revealed stressors identified in the Cycle of Family Function (Smilkstein, 1980).

The hospitalization of a family member and the resulting stress on the family may produce a crisis within the family unit. Because families are complex systems (Miller, 1980), the development of a family crisis is dependent upon how the patient's family interprets the event as well as the effectiveness of coping mechanisms within the family. Additional concepts or theories that may need to be considered for future research would include family development theory

(Duvall, 1977); communication theory (Satir, 1967); and tension, stress, strain, and conflict related to General Systems Theory (Bertalanffy, 1968).

Two additional theories that may be useful in dealing with families with a family member in critical care are crisis theory and loss/grief theory. Crisis theory is based upon the work of Lindeman (1944) and Caplan (1964). Hospitalization of a critically ill family member may result in a family situational crisis. Thus, basic tenets of crisis intervention may need to be incorporated into the conceptual framework to develop nursing interventions that may be more effective in assisting families.

Kubler-Ross (1969) identified five stages of the grief process, beginning with denial and isolation and progressing to anger, bargaining, depression, and, ultimately, acceptance. Families may proceed through these predictable, identifiable stages at different paces and with varying intensity. Nursing interventions may need to be linked to the grief process as families develop different coping processes as they progress through these stages (Jacobson, 1986).

The Review of Research

Family members did not have difficulty completing the research tool and required only minimal assistance from the researcher. Family member ranking of the importance of needs (Table 9) was consistent with the needs reported by Molter (1979) and Leske (1986). The family members

identified all needs on the CCFNI to be important. No family member identified any additional need in the blank provided for this purpose. This finding supports previous research data suggesting the needs identified on the CCFNI are representative of the most important needs of family members of a critically ill patient.

Families were very receptive to the researcher and willing to participate in the study. Published research reflected studies that had been conducted with families at varying times following admission from a few hours to several days. Ability and willingness of the family to cooperate in this study were supportive of family cooperation noted in other research studies.

The analysis of data utilizing the five subscales of needs, rather than the 45 need items, was not identified in any previously published research. Analysis in this manner may allow the researcher to identify more clearly the importance of needs and the extent to which needs were perceived as met. Analysis of data utilizing these broad concepts may be helpful in the interpretation of research by more specifically identifying general need areas rather than individual need items.

The Design of the Study

The 60 family members who participated in the study were able to identify their needs, rank each need according to its importance, and determine the extent to which they perceived their needs had been met. The families were very

cooperative and eager to work with the researcher. Several families indicated their hope that their participation in the study may assist other families in dealing with the stress associated with the sudden hospitalization of a family member in an intensive care unit.

The initial contact with families ranged from 9 - 72 hr following admission of the family member, with a mean initial contact time of 29.3 hr. Although this time frame allowed minimal time for families to adjust to this sudden traumatic experience, the families were able to complete the questionnaires and participate in the study.

Families were able to keep their appointment times with the researcher. The families receiving nursing support or nursing informational intervention communicated freely and expressed personal feelings.

The usual, support, and informational interventions in this study were easily applied. There was a great deal of variability in the usual staff nursing intervention. The teaching and emotional support offered by the nursing staff to the family member varied, depending upon the interest and commitment of the nurse assigned to the patient. Some staff nurses were committed to family interventions and supported the family member, whereas other nurses had very minimal family contact. All staff nurses were aware this study was being conducted and may have increased their family interactions as a result.

Family members receiving the nursing support intervention often asked informational questions. However, the researcher was very careful not to answer these questions and responded by explaining to the family members that the researcher was not familiar with the patients' medical conditions.

Families receiving the nursing information intervention were able to individualize their informational needs and express these to the researcher. The families were receptive to explanations by the researcher and frequently asked additional questions. The researcher only addressed information related to the previously identified informational needs (Appendix A).

Although the interactions between families and the researcher occurred in private, families returned to a large family waiting room. This procedure allowed for verbal exchange among families in the different groups. The contamination of groups was controlled to an extent by the constant turnover of patients in the critical care area, as well as the extended length of time necessary for the researcher to conduct the study. It was very unusual for the researcher to have more than one family involved in the study at a time. However, there were a few families who had a family member in the critical care area for many weeks or months, which resulted in communications among families.

Family members were assured by the researcher that participation in the study would in no way affect the

nursing care their family member received. The researcher assured each family member that all data were anonymous and that the staff would only have access to group data at the completion of the study. Also, the researcher wore street clothes without a white laboratory coat to each family interaction. The researcher was identified as a UAB student by wearing a name tag. However, in spite of measures to overcome any family reluctance, the researcher believed the families viewed her as a very significant person having contact with the staff caring for their family member, and this perception may have affected their responses.

Summary of Conclusions

Data from this study suggest that an individual nursing intervention with the most significant family member is more effective than the usual nursing intervention in assisting that family member to meet his/her needs. Family members in the experimental groups receiving either support or informational nursing intervention had higher average scores on perceived met needs than family members receiving the usual nursing staff intervention (Table 7). The highest average subscale score for extent to which needs were perceived as met occurred in the experimental group receiving the nursing informational intervention.

Family members in the three groups rated the need for support as the least important of the five need areas. Although the family members did not perceive this need area to be highly important, the groups receiving the nursing

intervention designed to offer support perceived their support needs to be more highly met than the group receiving the usual nursing intervention. This finding suggests that nursing interventions should include support for family members.

The three groups had identical rankings of the five need areas on the extent to which they perceived their needs had been met. The needs identified from most highly met to least met were assurance, comfort, proximity, information, and support.

The greatest difference in the average score of the extent to which the family member perceived needs were met was in the group receiving the Information intervention. The greatest differences noted were in the the need for information (0.30), proximity (0.32), and support (0.31). However, these three needs were perceived as the needs that were least met in this study.

This difference in family perceptions may be best explained by considering the timing of data collection. The mean post admission time at which family members completed the tool to evaluate the extent to which they perceived their needs had been met was 54 hr. Although family members expressed the importance of the need for information and support and received a nursing intervention directed toward meeting these needs, they may be in a family state of crisis that affects their ability to evaluate accurately the extent to which their needs were actually met.

Because the support and informational nursing intervention in this study occurred so soon after admission, family members may have perceived their needs were met to a greater extent because of the individual attention they received from the nurse researcher. Although the data reflect that family members acknowledged that information and support were given, the families may not have been able to differentiate accurately between the 45 need items on the tool when they were asked to determine the extent to which their needs were met.

Another factor to be considered in this study is the condition or prognosis of the patient. All patients in this study were admitted to the critical care unit very suddenly subsequent to a life-threatening or potentially life-threatening alteration in a physiologic system. However, there was a great variance in the actual physical status of the patients. The families' state of crisis and their perceptions of needs and extent to which needs were perceived as having been met may have been affected by any changes in the patients' condition. When the patients' condition had improved or they developed no serious complications, the families were more optimistic and may have perceived their needs to have been met to a greater degree. However, when the patients' condition had deteriorated or the prognosis had become terminal, the resulting family crisis and stress may have negatively affected the families' perceptions of the extent to which their needs were met.

The findings in this study may have been influenced by family cultural traditions found to be prevalent in western Kentucky. Although the facility utilized in this study is located in an urban area and offers services similar to larger facilities, the patients utilizing the facility are primarily from rural communities. Families in this region tend to be very supportive and committed to the family structure. There is a strong tendency for adult children to remain in the geographic area, live near their parents, and maintain a close family bond. Family members are committed to being physically present in the facility housing the patient. Because of this commitment, the researcher had no difficulty in arranging meetings with family members. These cultural variables may not apply to a more urban location.

Another factor that may have influenced findings in this study is family stability or family functioning. Some families appeared to be in a state of dysfunction before the hospitalization of the family member. These family members were very difficult to work with and seemed to be under extreme stress. This variance in family stability needs to be addressed in future studies. Although investigators will not be able to control family functioning, the random assignment of families to various groups will account for these differences.

Recommendations for Future Research

Continued research should investigate the effectiveness of nursing interventions directed toward meeting families'

needs. Nurses have been found to be the primary source available to family members for need satisfaction (Krumberger, 1985). Additional nursing interventions should be designed and tested to determine their effectiveness in meeting family needs.

One important area not addressed by this study is the needs of family members over an extended period of time. The impact of critical illness on the family over time is unknown. Specific nursing interventions to help the families deal with their needs over varying time frames should be developed and evaluated for effectiveness.

The effectiveness of usual staff nursing interventions needs further study. Areas that should be included are staff perceptions of family needs, the effects of limited visitation, and various communication techniques.

Further research should focus on the needs of families from different age groups and different ethnic and educational backgrounds. Examples that could be included are parents of teenagers, elderly family members of elderly critically ill patients, male family members of critically ill patients, and family members of patients who attempted suicide.

Family members of critically ill patients may actively pursue their need satisfaction as a means of coping with stress (McCubbin & Patterson, 1983b). Further studies should investigate what means families use to meet their

needs and how nursing could incorporate this knowledge into more effective nursing interventions.

REFERENCES

Adams, M. (1978). Psychological responses in critical care units. American Journal of Nursing, 78, 1504.

Artinian, N. (1989). Family member perceptions of a cardiac surgery event. Focus on Critical Care, 16, 301-308.

Bay, E., Kupferschmidt, B., Opperwall, B., & Speer, J. (1988). Effect of the family visit on the patient's mental status. Focus on Critical Care, 15, 10-16.

Bedsworth, J., & Molen, M. (1982). Psychological stress in spouses of patients with myocardial infarction. Heart and Lung, 11, 450-456.

Bertalanffy, L. (1968). General systems theory. New York: George Brazilles.

Bouman, C. (1984). Identifying priority concerns of families of ICU patients. Dimensions of Critical Care Nursing, 3(5), 313-319.

Boyce, W., Jensen, E., Cassell, J., Collier, A., Smith, A., & Ramsey, C. (1977). Influence of life events and family routines on childhood respiratory tract illness. Pediatrics, 60, 609-615.

Boykoff, S. (1986). Visitation needs reported by patients with cardiac disease and their families. Heart and Lung, 15, 573-578.

Bozett, F., & Gibbons, R. (1983). The nursing management of families in the critical care setting. Critical Care Update, 10(2), 22-27.

Brandt, M. (1984). Consider the patient part of a family. Nursing Forum, 21, 19-23.

Brose, C. (1973). Theories of family crisis. In D. P. Hymovich & M. U. Barnard (Eds.), Family health care (pp. 271-283). New York: McGraw-Hill.

Brown, A. (1976). Effect of family visits on the blood pressure and heart rate of patients in the coronary-care unit. Heart and Lung, 5, 291-296.

Buckley, W. (1967). Sociology and modern systems theory. Englewood Cliffs, NJ: Prentice-Hall.

Bunn, T., & Clark, A. (1979). Crisis intervention: An experimental study of the effects of a brief period of counseling on the anxiety of relatives of seriously ill patients. British Journal of Medical Psychology, 52, 191-195.

Burnsten, B. (1965). Family dynamics, the sick role, and medical hospital admissions. Family Process, 4, 206-215.

Caplan, G. (1964). Principles of preventive psychiatry. New York: Basic Books.

Chatham, M. (1978). The effect of family involvement on patient's manifestations of postcardiotomy psychosis. Heart and Lung, 7, 995-999.

Cobb, S. (1976). Social support as a moderator of life stress. Psychosomatic Medicine, 38, 300-314.

Craven, R., & Sharp, B. (1972). The effects of illness on family functioning. Nursing Forum, 11, 186-193.

Cross, J. (1985). Betty Neuman. In J. B. George (Ed.) , Nursing theories: The base for professional nursing practice (pp. 258-286). Englewood Cliffs, NJ: Prentice-Hall, Inc.

Daley, L. (1984). The perceived immediate needs of families with relatives in the intensive care setting. Heart and Lung, 13, 231-237.

Doerr, B., & Jones, J. (1979). Effect of family preparation on the state anxiety level of the CCU patient. Nursing Research, 28, 315-316.

Dracup, K., & Breu, C. (1978). Using nursing research findings to meet the needs of grieving spouses. Nursing Research, 27, 221-216.

Dunkle, J., & Eisendrath, S. (1983). Families in the intensive care unit: Their effect on staff. Heart and Lung, 12, 2258-2261.

Duvall, E. (1977). Marriage and family development. Philadelphia, PA: J.B. Lippincott Co.

Fagin, C., & Nusbaum, J. (1978). Parental visiting privileges in pediatric units: A survey. Journal of Nursing Administration, 8(1), 24-27.

Ferreira, A. (1963). Family myth and homeostasis. Archives of General Psychiatry, 9, 457-463.

Forrester, D., Murphy, P., Price, D., & Monaghan, J. (1990). Critical care family needs: Nurse-family member confederate pairs. Heart and Lung, 19, 655-661.

Foundation for Critical Care. (1987). Brochure available from Foundation for Critical Care, 1001 Connecticut Avenue NW, Suite 428, Washington, DC 20036.

Friedman, M. (1981). Family nursing: Theory and assessment. Norwalk, CT: Appleton-Century-Crofts.

Fuller, B., & Foster, G. (1982). The effects of family/friend visits vs. staff intervention on stress/arousal of surgical intensive care patients. Heart and Lung, 11, 457-463.

Gaglione, K. (1984). Assessing and intervening with families of CCU patients. Nursing Clinics of North America, 19, 427-433.

Gillis, C. (1984). Reducing family stress during and after coronary artery bypass surgery. Nursing Clinics of North America, 19(1), 103-113.

Hampe, S. (1975). Needs of the grieving spouse in a hospital setting. Nursing Research, 24, 113-120.

Hickey, M. (1990). What are the needs of families of critically ill patients? A review of the literature since 1976. Heart and Lung, 19, 401-415.

Hill, R. (1949). Families under stress. New York: Harper & Row.

Hoover, M. (1979). Intensive care for relatives. Hospitals, 53, 219-222.

Hymovich, D. (1974). Incorporating the family into care. Journal of New York Nurses Association, 5, 332-338.

Jackson, D. (1957). The question of family homeostasis. Psychiatric Quarterly, 31, 79-90.

Jacobson, D. (1986). Types and timing of social support. Journal of Health and Social Behavior, 27, 250-264.

Jacobson, S. (1983). Stresses and coping strategies of neonatal intensive care units. Research in Nursing and Health, 6(1), 33-40.

Jillings, C. (1981). Nursing interventions with the family of the critically ill patient. Critical Care Nurse, 1(5), 27-31.

Kinney, M., Dear, C., Packa, D., & Voorman, D. (Eds.), (1981). AACW's clinical reference for critical care nursing. New York: McGraw-Hill.

Kirchhoff, K., Hansen, C., & Fullmer, N. (1985). Open visiting in the ICU: A debate. Dimensions of Critical Care, 4, 296-304.

Kirschbaum, M. (1983). The needs of parents of critically ill children. Unpublished master's thesis, University of Illinois Health Science Center, Chicago, IL.

Krumberger, J. (1985). Needs of families of adult cardiac surgery patients during the critical care phase: A descriptive study. Unpublished master's thesis, Marquette University, Milwaukee, WI.

Kubler-Ross, E. (1969). On death and dying. New York: Macmillan Publishing Co.

Leske, J. (1986). Needs of relatives of critically ill patients: A follow-up. Heart and Lung, 15, 189-193.

Leske, J. (1988). Selected pshcyometric properties of the critical care family needs inventory. Unpublished doctoral dissertation, The University of Wisconsin-Milwaukee.

Lindeman, E. (1944). Symptomology and management of acute grief. American Journal of Psychiatry, 101, 101-148.

Lust, B. (1984). The patient in the ICU: A family experience. Critical Care Quarterly, 6(4), 49-57.

Mathis, M. (1984). Personal needs of family members of critically ill patients with and without acute brain injury. Journal of Neurosurgical Nursing, 16, 36-44.

Mayou, R., Foster, A., & Williamson, B. (1978). The psychological and social effects of myocardial infarction on wives. British Medical Journal, 6258, 701-703.

McCubbin, H., & Patterson, J. (1983a). Family stress and adaptation to crisis. In D. Olson, & B. Miller (Eds.), Family studies review yearbook, Vol. 1. Beverly Hills, CA: Sage Publications.

McCubbin, H., & Patterson, J. (1983b). Family transitions: Adaptations to stress. In H. McCubbin and C. Figley (Eds.), Stress and the family: Coping with normative transitions, New York: Brunner-Mazel.

Meyer, R., & Haggerty, R. (1962). Streptococcal infections in families. Pediatrics, 29, 5334-5349.

Miller, J. (1980). The family as a system. In J. R. Miller & E. H. Janosic (Eds.), Family-focused care. New York: McGraw-Hill.

Molter, N. (1976). The identification of needs and their importance to relatives of critically ill patients. Unpublished master's thesis, Emory University, Atlanta, GA.

Molter, N. (1979). Needs of the relatives of critically ill patients: A descriptive study. Heart and Lung, 8, 332-339.

Molter, N., & Leske, J. (1983). Critical Care Family Needs Inventory. Available from author.

Neuman, B. (1989). The Neuman systems model. East Norwalk, CN: Appleton & Lange.

Norris, L., & Grove, S. (1986). Investigation of selected psychosocial needs of family members of critically ill adult patients. Heart and Lung, 15, 194-199.

Nunnally, J. (1978). Psychometric theory (2nd ed.). New York: McGraw-Hill.

O'Brien, M. (1983). An identification of the needs of family members of terminally ill patients in a hospital setting. Military Medicine, 148, 712-716.

Olsen, E. (1970). The impact of serious illness on the family system. Postgraduate Medicine, 47, 169-174.

Orlando, I. (1961). Dynamic nurse-patient relationship. New York: G. P. Putnam's Sons.

Powell, E. (1984). The self-perceived needs of relatives of the coronary patient in the intensive care. Unpublished master's thesis, Virginia Commonwealth University, Richmond, VA.

Prowse, M. (1984). Needs of family members of patients as perceived by family members and nurses in an intensive care unit: An exploratory study. Heart and Lung, 13, 310-311.

Raise, S. (1980). Meeting families' needs helps you meet ICU patients' needs. Nursing, 10(7), 32-35.

Rappaport, L. (1965). The state of crisis: Some theoretical considerations. In H. J. Parad (Ed.), Crisis intervention: Selected readings. New York: Family Service Association of America.

Reddish, P., & Blumenfield, M. (1984). Psychological reactions in wives of patients with severe burns. Journal of Burn Care and Rehabilitation, 5, 388-390.

Ritchie, J. (1981). Meeting the informational needs of the critically ill. Dimensions in Health Service, 58(8), 15-17.

Rodgers, C. (1983). Needs of relatives of cardiac surgery patients during the critical care phase. Focus on Critical Care, 10(5), 50-55.

Satir, V. (1967). Conjoint family therapy. Palo Alto, CA: Science and Behavior Books.

SAS Institute, Inc., Cary, NC. (1985). Statistical Analysis System (SAS) (Version 5).

Sax, G. (1980). Principles of educational and psychological measurement and evaluation. Belmont, CA: Wadsworth Publishing Co.

Selye, H. (1950). The physiology and pathology of exposure to stress. Montreal: ACTA.

Selye, H. (1956). The stress of life. New York: McGraw-Hill.

Shapiro, J. (1983). Family reactions and coping strategies in response to the physically ill or handicapped child: A review. Social Science and Medicine, 17, 913-931.

Skelton, M., & Dominian, J. (1973). Psychological stress in wives of patients with myocardial infarction. British Medical Journal, 5858, 101-103.

Smilkstein, G. (1980). The cycle of family function: A conceptual model for family medicine. Journal of Family Practice, 11, 223-232.

Spatt, L., Ganas, E., Hying, S., Kirsch, E., & Koch, M. (1986). Informational needs of families of intensive care unit patients. Quality Review Bulletin, 12(1), 16-21.

Stillwell, S. (1984). Importance of visiting needs as perceived by family members in the ICU. Heart and Lung, 13, 238-242.

Turk, D., & Kerns, R. (1985). The family in health and illness. In D. C. Turk & R. D. Kerns (Eds.), Health, illness and families. New York: John Wiley & Sons.

APPENDIX A

SELECTED PSYCHOMETRIC PROPERTIES OF THE CRITICAL CARE FAMILY NEEDS INVENTORY

Selected Psychometric Properties of the Critical Care Family Needs Inventory

By

Jane Stover Leske, PhD, RN

The Critical Care Family Needs Inventory (1983) was developed for family assessment and self-report of specific needs. The instrument lists 45 need statements to be rated on a scale of 1-4 to indicate degree of importance. Although the instrument has been used widely as a research tool, its psychometric properties have not been determined adequately. Since critical care nurses need accurate data to begin appropriate intervention, and because the instrument has been used to collect such data, it was vital to determine the psychometric properties of the tool. Therefore, a methodological study was conducted to evaluate internal consistency reliability and construct validity of the tool. Empirical validation of the instrument followed the approach advocated by psychometric theory. Family need data on 677 subjects, collected by 21 nurse investigators, in 14 states, over a period of nine years (1980-1988) were used as an aggregate data base. Item analysis was conducted on the tool to identify those items which contribute most to the homogeneity of the measure. Forty-three items on the Critical Care Family Needs Inventory had item-total correlations between .25 and .60 indicating they were relatively homogeneous. No items were eliminated due to redundancy or lack of homogeneity with the construct. The internal consistency alpha coefficient was .92. Factor analysis was used to investigate the construct validity of the instrument. An exploratory stepwise analysis without prior specification about the nature and number of underlying factors was done to more clearly

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explicate the construct of family needs. A correlation matrix for all items was computed and examined to be sure that the items would share common factors. Correlations between the items ranged from $\underline{r}$ = .23 to $\underline{r}$ = .55 with at least one other item in the data set. Both Bartlett's test of sphericity and the Kaiser-Meyer-Olken measure of sampling adequacy were large. Principal components factor analysis with varimax rotation resulted.in a five factor solution as determined by eigenvalues greater than one, lack of trivial factors, scree plot, magnitude of residuals, simple structure convergence, item loadings, number of items per factor, and conceptual clarity. All 45 items had a significant loading (> .30) on one of the five factors. Correlations ranging from $\underline{r}$ = .07 to $\underline{r}$ = .39 between the five factors indicated that each factor contributed uniquely to the total construct. Alpha coefficients for each factor ranged from .61 to .88. Interpretation and labeling of factors were done by a panel of 10 nurse experts. The five dimensions of the Critical Care Family Needs Inventory were labeled as needs for support, comfort, information, proximity, and assurance. The results of the factor analysis suggested that the factors underlying the instrument were relatively distinct dimensions, yet the item-total correlations indicated that all the items related to the overall construct of family needs during critical illness. The Critical Care Family Needs Inventory is a multidimensional index measuring five relatively distinct domains. Sufficient psychometric properties warrant use of the tool in research and clinical practice.

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Factor Loadings for Rotated Five Factor Structure from Responses to Items on the CCFNI (N=677)

Items	Factor A - Support Needs
To be told about someone to help with family problems	.67
To talk about negative feelings such as guilt and anger	.65
To be encouraged to cry	.64
To be told about other people that could help with problems	.63
To be told about chaplain services	.61
To have someone help with financial problems	.59
To be alone at any time	.57
To have another person with the relative when visiting the critical care unit	.55
To have the pastor visit	.55
To have a place to be alone while in the hospital	.52
To have directions as to what to do at the bedside	.51
To talk about the possibility of the patient's death	.46
To have friends nearby for support	.45
To have someone be concerned with relative's health	.42
To have explanations of the environment before going into the critical care unit for the first time	.42

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Factor B - Comfort Needs	
Items	
To have the bathroom near the waiting room	.75
To have comfortable furniture near the waiting room	.67
To have a telephone near the waiting room	.66
To have good food available in the hospital	.46
To be assured it is alright to leave the hospital for awhile	.42
To feel accepted by the hospital staff	.40

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Factor C - Information Needs Items	
To know why things were done for the patient	.70
To know how the patient is being treated medically	.68
To know exactly what is being done for the patient	.65
To know about the types of staff members taking care of the patient	.59
To know which staff members could give what type of information	.47
To help with the patient's physical care	.43
To talk to the doctor everyday	.39
To have a specific person to call at the hospital when unable to visit	.32

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Factor D - Proxmity Needs	
Items	
To visit at anytime	.60
To see the patient frequently	.57
To receive information about the patient once a day	.54
To have visiting hours changed for special conditions	.41
To be called at home about changes in the patient's condition	.40
To be told about transfer plans while they are being made	.40
To have the waiting room near the patient	.39
To have visiting hours start on time	.37
To talk to the same nurse every day	.37

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Factor E - Assurance Needs	
Items	
To have questions answered honestly	.64
To have explanations given that are understandable	.54
To be assured that the best care possible is being given to the patient	.52
To know specific facts concerning the patient's progress	.46
To feel that hospital personnel care about the patient	.39
To know the prognosis	.38
To feel there is hope	.35

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Reliability of Total CCFNI = .92

Alpha for each Factor

Factor A = .88

Factor B = .75

Factor C = .78

Factor D = .71

Factor E = .61

Readability Grade Levels

Gunning Fox Index	8th Grade
Fry	6th Grade

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APPENDIX B

PERSONAL DATA SHEET

PERSONAL DATA SHEET

L. Sex of family member:

Female_____ Male_____

2. Sex of patient:

Female_____ Male_____

3. How are you related to the patient?

4. How old are you?

5. Approximately how many miles do you live from the hospital?

6. Have you had previous experience with an intensive care unit? If so, please give a brief statement explaining your experience.

7. Educational level of family member:

Less than seventh grade _____
Junior high school _____
Parital high school _____
High school graduate _____
College graduate _____
Graduate of professional training _____

8. Your perceived condition of family member:
Good _____
Fair _____
Serious _____
Critical _____

APPENDIX C

CRITICAL CARE FAMILY NEEDS INVENTORY

Critical Care Family Needs Inventory

Nancy C. Molter
Jane Stover Leske

Please check (✓) how IMPORTANT each of the following needs is to you.	Not Important (1)	Slightly Important (2)	Important (3)	Very Important (4)
1. To know the prognosis				
2. To have explanations of the environment before going into the critical care unit for the first time				
3. To talk to the doctor every day				
4. To have a specific person to call at the hospital when unable to visit				
5. To have questions answered honestly				
6. To have visiting hours changed for special conditions.				
7. To talk about negative feelings such as guilt or anger				
8. To have good food available in the hospital				
9. To have directions as to what to do at the bedside				
10. To visit at any time				
11. To know which staff members could give what type of information				
12. To have friends nearby for support				
13. To know why things were done for the patient				
14. To feel there is hope				
15. To know about the types of staff members taking care of the patient				

		Not Important (1)	Slightly Important (2)	Important (3)	Very Important (4)
16.	To know how the patient is being treated medically	_____	_____	_____	_____
17.	To be assured that the best care possible is being given to the patient	_____	_____	_____	_____
18.	To have a place to be alone while in the hospital	_____	_____	_____	_____
19.	To know exactly what is being done for the patient	_____	_____	_____	_____
20.	To have comfortable furniture in the waiting room	_____	_____	_____	_____
21.	To feel accepted by the hospital staff	_____	_____	_____	_____
22.	To have someone to help with financial problems	_____	_____	_____	_____
23.	To have a telephone near the waiting room	_____	_____	_____	_____
24.	To have the pastor visit	_____	_____	_____	_____
25.	To talk about the possibility of the patient's death	_____	_____	_____	_____
26.	To have another person with the relative when visiting the critical care unit	_____	_____	_____	_____
27.	To have someone be concerned with the relative's health	_____	_____	_____	_____
28.	To be assured it is alright to leave the hospital for awhile	_____	_____	_____	_____
29.	To talk to the same nurse every day	_____	_____	_____	_____
30.	To be encouraged to cry	_____	_____	_____	_____
31.	To be told about other people that could help with problems	_____	_____	_____	_____

		Not Important (1)	Slightly Important (2)	Important (3)	Very Important (4)
32.	To have a bathroom near the waiting room	____	____	____	____
33.	To be alone at any time	____	____	____	____
34.	To be told about someone to help with family problems	____	____	____	____
35.	To have explanations given that are understandable	____	____	____	____
36.	To have visiting hours start on time	____	____	____	____
37.	To be told about chaplin services	____	____	____	____
38.	To help with the patient's physical care	____	____	____	____
39.	To be told about transfer plans while they are being made	____	____	____	____
40.	To be called at home about changes in the patient's condition	____	____	____	____
41.	To receive information about the patient once a day	____	____	____	____
42.	To feel that the hospital personnel care about the patient	____	____	____	____
43.	To know specific facts concerning the patient's progress	____	____	____	____
44.	To see the patient frequently	____	____	____	____
45.	To have the waiting room near the patient	____	____	____	____
46.	Other:	____	____	____	____

APPENDIX D

EXTENT TO WHICH NEEDS WERE MET QUESTIONNAIRE

Please check (✓) how IMPORTANT each of the following needs is to you.	Not Important (1)	Slightly Important (2)	Important (3)	Very Important (4)
1. To know the prognosis	____	____	____	____
2. To have explanations of the environment before going into the critical care unit for the first time	____	____	____	____
3. To talk to the doctor every day	____	____	____	____
4. To have a specific person to call at the hospital when unable to visit	____	____	____	____
5. To have questions answered honestly	____	____	____	____
6. To have visiting hours changed for special conditions	____	____	____	____
7. To talk about negative feelings such as guilt or anger	____	____	____	____
8. To have good food available in the hospital	____	____	____	____
9. To have directions as to what to do at the bedside	____	____	____	____
10. To visit at any time	____	____	____	____
11. To know which staff members could give what type of information	____	____	____	____
12. To have friends nearby for support	____	____	____	____
13. To know why things were done for the patient	____	____	____	____
14. To feel there is hope	____	____	____	____
15. To know about the types of staff members taking care of the patient	____	____	____	____

		Not Important (1)	Slightly Important (2)	Important (3)	Very Important (4)
16.	To know how the patient is being treated medically	_____	_____	_____	_____
17.	To be assured that the best care possible is being given to the patient	_____	_____	_____	_____
18.	To have a place to be alone while in the hospital	_____	_____	_____	_____
19.	To know exactly what is being done for the patient	_____	_____	_____	_____
20.	To have comfortable furniture in the waiting room	_____	_____	_____	_____
21.	To feel accepted by the hospital staff	_____	_____	_____	_____
22.	To have someone to help with financial problems	_____	_____	_____	_____
23.	To have a telephone near the waiting room	_____	_____	_____	_____
24.	To have the pastor visit	_____	_____	_____	_____
25.	To talk about the possibility of the patient's death	_____	_____	_____	_____
26.	To have another person with the relative when visiting the critical care unit	_____	_____	_____	_____
27.	To have someone be concerned with the relative's health	_____	_____	_____	_____
28.	To be assured it is alright to leave the hospital for awhile	_____	_____	_____	_____
29.	To talk to the same nurse every day	_____	_____	_____	_____
30.	To be encouraged to cry	_____	_____	_____	_____
31.	To be told about other people that could help with problems	_____	_____	_____	_____

		Not Important (1)	Slightly Important (2)	Important (3)	Very Important (4)
32.	To have a bathroom near the waiting room	_____	_____	_____	_____
33.	To be alone at any time	_____	_____	_____	_____
34.	To be told about someone to help with family problems	_____	_____	_____	_____
35.	To have explanations given that are understandable	_____	_____	_____	_____
36.	To have visiting hours start on time	_____	_____	_____	_____
37.	To be told about chaplin services	_____	_____	_____	_____
38.	To help with the patient's physical care	_____	_____	_____	_____
39.	To be told about transfer plans while they are being made	_____	_____	_____	_____
40.	To be called at home about changes in the patient's condition	_____	_____	_____	_____
41.	To receive information about the patient once a day	_____	_____	_____	_____
42.	To feel that the hospital personnel care about the patient	_____	_____	_____	_____
43.	To know specific facts concerning the patient's progress	_____	_____	_____	_____
44.	To see the patient frequently	_____	_____	_____	_____
45.	To have the waiting room near the patient	_____	_____	_____	_____
46.	Other:	_____	_____	_____	_____

APPENDIX E

PERMISSION TO REPRODUCE THE CRITICAL CARE FAMILY NEEDS INVENTORY (CCFNI)

5333 W. River Trail
Mequon, WI 53092
(414) 242-9696

June 28, 1989

LaVaughn Watson
Rt #2 Box 169
Calvert City, KY 42029

Dear LaVaughn,

You have my permission to reproduce the copyrighted need statements, Critical Care Family Needs Inventory, for investigational purposes as long as appropriate authorship, copyright, and permission is documented in your work. Please find enclosed a copy of the Critical Care Family Needs Inventory (CCFNI) for your information. Either Nancy Molter or myself can grant you permission to use the tool. Your proposed study sounds excellent and certainly worth pursuing.

I also am enclosing a review of the psychometric properties of the instrument. Any suggestions you may have regarding the instrument will be appreciated. I wish you success in your nursing research endeavor. If I can be of any further help, do not hesitate to call or write.

Sincerely,

Jane Leske

Jane Leske PhD, RN

APPENDIX F

PARTICIPANT INFORMATION SHEET

PARTICIPANT INFORMATION SHEET

You are invited to participate in a research study that will evaluate the effectiveness of nursing interventions in meeting the needs of families that have a family member in a critical care unit. You have special needs during this stressful period, and it is our hope that this study will assist health professionals in providing the best support possible to you and the patient.

The 3-part questionnaire consists of one page of general information about yourself and your hospitalized relative. The second part consists of 45 statements of needs which you will rank from 1 - 4 based on the importance of the need to you. The third part of the questionnaire evaluates how you perceive your needs have been met.

LaVaughn Watson will meet with you on two consecutive days in the family waiting room to assist you in this study. The meeting times will be adjusted to your availability and convenience.

Complete anonymity and confidentiality are assured. The information obtained will be analyzed as group data. If you agree to participate, or if you choose not to, your decision in no way affects the care the patient receives. You are free to withdraw your consent to participate at any time prior to completion of the questionnaire.

If you have any questions about the research project, LaVaughn Watson will be glad to answer them. Mrs. Watson's phone number is 395-5748.

Completion of the questionnaire indicates your consent to participate in the study.

APPENDIX G

HUMAN USE APPROVAL

The University of Alabama at Birmingham
Institutional Review Board for Human Use
205/934-3789
Telex 888826 UAB BHM

FORM 4: IDENTIFICATION AND CERTIFICATION OF RESEARCH PROJECTS INVOLVING HUMAN SUBJECTS

THE INSTITUTIONAL REVIEW BOARD (IRB) MUST COMPLETE THIS FORM FOR ALL APPLICATIONS FOR RESEARCH AND TRAINING GRANTS, PROGRAM PROJECT AND CENTER GRANTS, DEMONSTRATION GRANTS, FELLOWSHIPS, TRAINEESHIPS, AWARDS, AND OTHER PROPOSALS WHICH MIGHT INVOLVE THE USE OF HUMAN RESEARCH SUBJECTS INDEPENDENT OF SOURCE OF FUNDING.

THIS FORM DOES NOT APPLY TO APPLICATIONS FOR GRANTS LIMITED TO THE SUPPORT OF CONSTRUCTION, ALTERATIONS AND RENOVATIONS, OR RESEARCH RESOURCES.

PRINCIPAL INVESTIGATOR: LaVaughn Watson

PROJECT TITLE: The Effectiveness of Nursing Interventions In Meeting Informational Needs of Family Members

---

_____1. THIS IS A TRAINING GRANT. EACH RESEARCH PROJECT INVOLVING HUMAN SUBJECTS PROPOSED BY TRAINEES MUST BE REVIEWED SEPARATELY BY THE INSTITUTIONAL REVIEW BOARD (IRB).

_____2. THIS APPLICATION INCLUDES RESEARCH INVOLVING HUMAN SUBJECTS. THE IRB HAS REVIEWED AND APPROVED THIS APPLICATION ON _____ IN ACCORDANCE WITH UAB'S ASSURANCE APPROVED BY THE UNITED STATES PUBLIC HEALTH SERVICE. THE PROJECT WILL BE SUBJECT TO ANNUAL CONTINUING REVIEW AS PROVIDED IN THAT ASSURANCE.

_____ THIS PROJECT RECEIVED EXPEDITED REVIEW.

_____ THIS PROJECT RECEIVED FULL BOARD REVIEW.

_____3. THIS APPLICATION MAY INCLUDE RESEARCH INVOLVING HUMAN SUBJECTS. REVIEW IS PENDING BY THE IRB AS PROVIDED BY UAB'S ASSURANCE. COMPLETION OF REVIEW WILL BE CERTIFIED BY ISSUANCE OF ANOTHER FORM 4 AS SOON AS POSSIBLE.

X 4. EXEMPTION IS APPROVED BASED ON NUMBER(S) 3.

DATE: 12-14-89

RUSSELL CUNNINGHAM, M.D.
INTERIM CHAIRMAN OF THE
INSTITUTIONAL REVIEW BOARD

APPENDIX H

CONSENT FORM

CONSENT FORM

LaVaughn Watson has permission to conduct research at Lourdes Hospital in Paducah, Kentucky to fullfill the requirements of the Doctor of Science in Nursing at The University of Alabama at Birmingham. The dissertation study will evaluate the needs of families that have a family member in a critical care unit, how the families judge their needs have been met, and the effectiveness of nursing interventions in meeting those needs.

Ellen Hedges 11/2/89

Ellen Hedges date
Vice President Nursing

Gerald J. LaGesse 11/2/89

Gerald J. LaGesse date
President

GRADUATE SCHOOL
UNIVERSITY OF ALABAMA AT BIRMINGHAM
DISSERTATION APPROVAL FORM

Name of Candidate LaVaughn Watson

Major Subject Adult Health Nursing

Title of Dissertation Comparison of the Effects of Usual, Support, and Informational Nursing Interventions on the Extent to Which Families of Critically Ill Patients Perceive Their Needs Were Met

Dissertation Committee:

Marguerite R. Kenney, Chairman

DCP Longenecker

Jeanette Bedford

Mary Colette Smith

Martha E. Branson

Director of Graduate Program Elizabeth Stillenbarger

Dean, UAB Graduate School Jerry L. Mickey

Date April 12, 1991

PS-1428